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# THE JOURNAL OF CUTANEOUS DISEASES

INCLUDING SYPHILIS

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JAMES C. WHITE, M. D.

GEORGE M. MACKEE, M.D., NEW YORK

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# THE JOURNAL OF CUTANEOUS DISEASES

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NO. 1

## NODULAR TUBERCULOSIS OF THE HYPODERM.\*

By GROVER W. WENDE, M.D., Buffalo.

**M**RS. C., aged forty-three, was of medium height, a native of England, and a washerwoman by occupation; she came to this country five years ago.

**FAMILY HISTORY.** The patient's father is seventy-five years of age and healthy; her mother died in childbirth at the age of forty-eight; an older brother and a younger sister died in infancy, cause unknown. No history of syphilis or of tuberculosis in any member of the family, so far as could be ascertained.

**PAST PERSONAL HISTORY.** The patient, when a child, had rubeola, scarlatina and variola. During girlhood she was always healthy. Acute articular rheumatism appeared at the age of twenty-five.

**HISTORY OF THE DISEASE.** In January, 1903, while still in England, she suddenly experienced pain in the temples and at the top of the head. About this time a lump, the size of a hickory nut, showed itself at the junction of the coronal and sagittal sutures. This slowly increased, but was not preceded by any redness or scaling of the skin. In two or three months it slowly extended toward the right temple, changing to a flat, linear lesion, probably due to the formation and combination of new lesions. This new growth slowly became smaller and finally disappeared, leaving no apparent alteration in the skin. Almost immediately there was a second outbreak, at the back of the right ear, that attained the size of a pigeon's egg. Having reached its maximum stage, it preserved its dimensions for three months and was associated with considerable pain, as well as deafness, the latter continuing to the present time. There was no discharge from the ear, but occasional clinking tinnitus. Before the lesion disappeared, the

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

disease invaded the right cheek over the temporo-maxillary articulation, causing, at first, almost complete ankylosis, which has persisted in varying degrees ever since. Lumps, lasting from two to eight months, continued to come and go; the patient was never free from them. These were always on the same side and, later, began to show a tendency to group and cause the cheek to bulge. At times the patient could feel that they involved the mucous membrane of the mouth; she also complained of heaviness and fulness in the jaw, with continuous pain. From the cheek the condition gradually extended to the chin, and, for the last six months previous to coming under observation, began to develop on the left side. Careful inquiry failed to furnish evidence of any previous invasion of the oral cavity by either growth or ulceration.

**PRESENT CONDITION.** January 1, 1909. The patient looks well, and has a good appetite, although some inconvenience is caused by not being able to masticate freely. The ankylosis is so marked that it is impossible to open the mouth even for a single half inch.

**PHYSICAL EXAMINATION.** A physical examination revealed no signs of constitutional disease; the urine and blood were found to be normal; the entire skin of the body was natural, with the exception of the face, the left side of which lacked expression. The mucous membrane of the mouth was free from disease. The skin was exempt from scars, pigmentation and atrophy. Upon palpation the chin felt as if it contained a small collection of marbles, varying in size from a pea to a pigeon's egg, all situated in the subcutaneous tissue. Upon manipulation, the lesions were found to be indurated masses, deeply located under the skin, freely movable and having a border resembling cartilage. The nodules were painful to the touch. There was no change in color, save in the case of the largest one, the overlying skin of which was glistening red. None of the lesions showed any tendency to suppurate or ulcerate. Subsequent examinations, at different periods, showed that the condition was practically the same, save as new lesions were found, occupying other locations.

**CONDITION ON JANUARY 1, 1910.** The lesions had practically disappeared from the right side and now extended around the mouth, forming a ridge resembling cartilage, about an inch wide and invading the left cheek. In close relation were three nodules of hickory-nut size and of four weeks' duration. These were, as usual, deep-seated in the hypoderm.

**MICROSCOPIC EXAMINATION.** A biopsy of a portion of the lesion near the right angle of the mouth, about the size of a split pea,



showed slightly red. It was fixed in alcohol, embedded in collodion and stained in various ways.

The pathological process may be summarized as practically limited to the subcutaneous areolar tissue and almost surrounded by it. The lobes and lobules of fat and the interlobular septa had been replaced by the infiltration, consisting mostly of round cells, between which, occasionally, were accumulations of epithelioid cells. In instances the proliferation was surrounded by a fine layer of fibrous tissue, which had eliminated the fat. In the centre of the nodule and upper portion of the infiltration there were a great many multinucleated cells and some typical giant cells, so arranged and distributed that the appearance was characteristic of tuberculosis. In sections stained by Gram's and Ziehl-Nielson's method, acid-fast bacilli were found in and between the giant cells. In two instances, two of these were discovered in the same cell.

The architecture of the nodule was similar, in some respects, to certain stages of erythema induratum. There were present numerous leucocytes consisting of polynuclear cells and lymphocytes. A number of plasma and a few mast cells were observed. All the cells were closely aggregated, separated only by scanty and oedematous collagenous fibres, which, in some places, had entirely disappeared. The elastic tissue persisted for a longer period, although, at some points, it was entirely absent. The blood vessels of the papillary layer of the corium were dilated, and, in a few instances, surrounded by a round cell infiltration. The deeper cutaneous vessels showed marked proliferating changes. The walls were thickened and, in places, the lumen was occluded. Throughout the entire arrangement of the growths the infiltration seemed to follow the course of the blood vessels. In one section, the remnant of a sweat gland was completely surrounded by the infiltration, leading from the original tumor formation. The epidermis was apparently normal, although there was a flattened appearance to the papillæ of the skin.

**TUBERCULIN IN DIAGNOSIS AND TREATMENT.** A drop of one per cent. Calmette tuberculin solution was introduced into the patient's left eye on January 10, 1910. Four hours later, the eyes became inflamed and continued for a day to grow worse, ending in exudation. The condition was painful. There was an apparent reaction of the lesions of the skin, which were especially sensitive to manipulation.

After the diagnosis of tuberculosis was established, injections of tuberculin of one-tenth milligramme ten days apart, were used. Constitutional reaction, with fever, was but slight. Two months after

treatment there was a pronounced shrinkage of the nodules, one-half having disappeared. Although the treatment was too recent, and not long enough continued, to justify prophecy as to the persistence of its favorable effect, nevertheless the results, so far, have been extremely encouraging.

**INOCULATIONS.** Six guinea pigs were employed, three for control purpose. Into the other three, fragments of the tissue were introduced into the peritoneal cavity. Guinea pig No. 1: Weight 19 ounces; inoculated January 10, 1910. In six weeks (Feb. 25th) showed, by irregular fever, evidence of systemic infection. Killed on March 5th, and the autopsy showed a general tuberculosis of the lungs and spleen: the latter measured about two inches in diameter and was yellowish-white in color; the mesenteric and bronchial glands were unusually large and, after opening, showed yellowish areas, presenting cheesy degeneration. Microscopical examination revealed tubercle bacilli and characteristic tuberculous tissue. Guinea pigs Nos. 2 and 3, inoculated January 10th, killed March 6th, showed no sign of inoculation or enlarged glands, and all the organs were normal. The difference here to be observed may have been due to the scanty material employed. The three control guinea pigs not only remained healthy but gained in weight.

**SUMMARY.** The salient features in this case consist in the facts that the patient was unusually healthy, with no history of tuberculosis in the family or in herself previous to the present attack. This began at the age of thirty-six, and was characterized by progressive development of painful, indolent deep-seated tumors, of varying size, tending to group in close and semi-coalescing patches, responding to touch, beginning at a given point and gradually extending around the face. Just what influenced the course of the disease is unknown, but it is possible that it simply followed lymphatic trunks. The nodules were always deep-seated, with a firm consistency, a normal epidermis and never caused scars, or discoloration. When regression took place, at the articulation of the jaw and back of the ear, it must have resulted in fibrous tissue formation and permanent ankylosis. The deafness and ankylosis are of special interest, on account of their entirely unexpected association with the primary lesions.

The case was shown to our President, Dr. William A. Pusey, and to Dr. H. R. Varney, both of whom agreed in the opinion that it presented a quite unusual condition, virtually impossible to diagnose. The true nature of the affection was not suspected until revealed by microscopical examination.

A great variety of hard, subcutaneous nodules is to be met with in the routine examinations of patients, many of which are not to be defined until they are removed for biopsy. The condition apparently developed in the hypoderm, constituting a proliferative change in the vicinity of the blood vessels, ending in the characteristic tuberculous architecture. It is worthy of note, while seeking to establish the nature of the tissue, that tubercle bacilli existed in unusual numbers.

While the recognized clinical varieties of tuberculosis of the skin are often associated with subsidiary modifications and complications, brought about either by differences of site, regional or anatomical, or by varying virulence of the strain of the bacilli, nevertheless this case had so many features of its own that it is impossible rightly to classify it with any of the usual clinical forms. We have here, then, a form of that affection which shows no analogy with the generally recognized forms of cutaneous tuberculosis, due to the invasion of the integument by the tubercle bacilli, like that of lupus vulgaris, tuberculosis verrucosa, tuberculosis disseminata and tuberculosis ulcerosa. The only forms of tuberculosis that we need to consider are those commencing in the hypoderm, and we recognize that in certain stages, there are several varieties that present tuberculous gummata, corresponding to the nodules in the present case.

If scrofuloderma is to be taken into account, it must be remembered that it often begins with deep-seated nodules representing tuberculous glands, or other foci of tuberculosis beneath the skin, previous to the suppurative stage, and, in the initial stage. This may manifest itself about the face, and would, in some cases, correspond with the present one: but the rapidity with which the nodules soften and destroy the overlying skin constitutes its principal characteristic. In the present case the nodules never broke down, and were of unusual duration. Scrofuloderma is commonly met with at an earlier age than that of the case under consideration. It might be possible that the lesion was due to a modification of the infectious agent, or to reaction on the part of the tubercle bacilli. While this does not amount to positive proof it is worthy of thought in connection with the different clinical pictures produced by the tubercle bacilli.

Lymphangitis tuberculosa cutanea was also carefully considered, for one might suspect the development of secondary deep-seated nodes, arising from the progressive infection of the lymphatic vessels of the skin from a tuberculous ulcer of the mouth, although the

beginning occurred on the forehead, away from the lymphatic trunks directly connected with the oral cavity. The only other pertinent condition involving similar deep-seated lesions is that of erythema induratum, but it would be inappropriate to designate the condition as such, on account of, in the latter, the violaceous color, the difference in locality, the tendency to ulceration and the presence of scars. Microscopically, however, the picture bears a close resemblance to the foregoing affection, although the readiness with which the bacilli were found and the establishment of tuberculous inoculation is rarely observed in connection with erythema induratum. While that affection is accepted by the majority of observers as a manifestation of tuberculosis, the bacillus has been found in comparatively few instances, never in the number existing in the case here presented.

### DISCUSSION.

DR. HOWARD FOX said he had shown a case at a recent meeting of the New York Dermatological Society which was very similar to the one reported by Dr. Wende. The patient had a number of subcutaneous nodules on the face, and a few on the shoulder. These had been present about two and a half years. There were no evidences of necrosis or of suppuration. Various diagnoses were suggested, among them syphilis, leprosy, tuberculide and aene indurata. No diagnosis seemed satisfactory. The results of a biopsy showed a focal infiltration consisting chiefly of lymphoid cells grouped about the sweat coils. No animal inoculations had been made. A probable diagnosis of Darier's type of sarcoid was made.

DR. RAVOGLI, after congratulating Dr. Wende upon his interesting paper, said that he had reported two cases of tuberculosis verrucosa of the ear which began in the form of a lupus. In one of the cases, prior to the patient's death, the entire ear was destroyed and the bones were involved. In the other case, the original lupus sprang from the auricle. That patient had died since the case was reported. In another case the lesion began as a lupus involving the derma, and gradually invading the deeper tissues. In all of his cases he had found that a lupus preceded the tuberculous lesion. As long as the elastic fibres remained intact, the tuberculous process was limited, but after they had been destroyed, the process invaded the collagenous tissue of the subcutaneous layer, and there was no further obstacle to prevent its extension.

Dr. Ravogli said he would not be surprised to learn that the case reported by Dr. Wende began in the form of an erythema induratum from the skin or from a tuberculous ulcer from the mucous membrane of the mouth.

Dr. Fordyce said the case so well reported by Dr. Wende was an illustration of the value of careful clinical observation combined with histological investigation. With the aid of the latter, we were broadening our clinical ideas in regard to tuberculosis of the skin.

Several cases similar to the one reported by Dr. Wende had been shown at various times in New York, including the one mentioned by Dr. Howard Fox, which he believed was the only one that was followed up histologically. The others were shown under various diagnoses, such as sarcoid, etc. Many of these cases, Dr. Fordyce believed, were really tuberculous. Where the lesions were super-





FIG. 1.

Nodular Tuberculosis of the Hypoderm.  
Showing nodules and scars on forehead.

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ficially situated, we had resulting atrophy, similar to that observed in lupus erythematosus.

DR. CORLETT thought that Dr. Wende's report of this case tended to confirm the statement that post-mortem findings showed that a majority of adults were affected with tuberculosis, many without knowing it. The fact that most adults were the bearers of tubercle bacilli was confirmed by the recent delicate tests for tuberculosis, which showed as high as ninety per cent. of positive reaction in adults. Observation taught us that many clinical forms of superficial tuberculosis of the skin existed.

DR. WENDE, replying to Dr. Ravogli, said he thought the initial lesion, starting as it did on the forehead, furnished but meagre proof that it was secondary to some deep-seated lesion. While there might have been a concealed focus, every attempt was made to find tuberculous deposits. If there were, the general appearance of the patient would have shown evidence that she was suffering from constitutional tuberculosis.

Dr. Wende believed the disease primarily occurred locally in the skin. This case illustrated the importance of a biopsy for microscopical examination, as there was not a suspicion of the real condition before it was made.

The speaker did not believe this could be considered an anomalous form of erythema induratum, or any of the other recognized clinical varieties. While they were modified by the condition of the patient, the resistance of the tissue or variety of tubercle bacilli, there was every reason to believe that the case presented unique features not heretofore developed in connection with tuberculosis of the skin.

## MYCOSIS FUNGOIDES.\*

By LUCIUS C. PARDEE, M.D., and F. ROBERT ZEIT, M.D., Chicago.

SINCE Alibert first described the symptom complex which he called "pian fongoïde," there has perhaps been no disease of such comparative rarity which has had such diverse pictures drawn of its clinical aspects, and at the same time caused such diametrically opposite opinions to be formed by equally trained observers, regarding its ætiology and pathology. First one and then another of the schools, if one may so call them, has had its ascendancy, placing the disease in question, which has become known as mycosis fungoides, or granuloma fungoides, first in the category of sarcoma, then as a type of possibly infectious granuloma although no infective agent nor source of infection has been described, third as a form of lymphadenoma, fourth as the cutaneous expression of a leukæmic process, and finally as an independent pathological entity.

Regarding its clinical aspects it may now be safely asserted that there are three, and perhaps four types recognized at the present time.

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

First. The usual form that is made manifest by a variable period of disturbed health, accompanied by dermatoses, apparently superficial, of an eczematoid, erythematous, or lichenoid nature, which may appear and disappear several times before they terminate in the formation of fungoid tumors, when death ensues.

Second. A type which begins as an acute lymphangitis of a recurring character, which also ends in tumor formation with fatal results.

Third. The "tumeurs d'emblée" of the French authors, which lacks the antecedent eruptions of the other forms.

Fourth. There have been a number of cases reported as leukæmia, pseudo-leukæmia, and lymphoderma with coincident dermatoses similar to those of mycosis fungoides, but lacking in some essential point the full character of this clinical entity.

Before entering into a discussion regarding the proper class in which to place the following case, a consideration of its features seems germane.

HISTORY. The patient, a widow fifty-seven years of age, was referred to me in September, 1908. Her family history was negative, and other than the usual diseases of childhood, and an occasional attack of rheumatism, she had enjoyed good health until the present trouble began. She had been twice married, and has one child, now a man of twenty odd years, in good health, by the first husband. No history of lues nor of any serious acute illness was reported.

Two years previous to her consultation with one of us (Pardee), she had noticed after working in her garden for some time in a stooping posture, a bluish-red tumefaction appear on each leg between the knee and ankle. These caused her some discomfort for a time, but disappeared spontaneously, leaving no trace, and have not returned. A few months subsequent to this she began to suffer from a generalized pruritus, but no eruption was apparent for nearly a year.

PHYSICAL EXAMINATION. In appearance she was a woman of medium height, weighing perhaps one hundred and forty pounds. Her facial expression showed anxiety and the results of loss of sleep caused by the itching. She was quite weak and unable to walk any distance without resting, and there was a distinct muscular tremor following slight exertion. The heart and lungs were apparently normal. The spleen was palpable and somewhat enlarged; the area of dullness over the liver was increased and its border could be felt below the ribs.

The superficial glands were palpable, but not markedly increased in size. The entire skin was of a yellowish hue suggesting a beginning jaundice, but at this time there was no discoloration of the optic sclera. Upon the legs (Fig. 1), thighs, and arms there appeared a symmetrical eruption of plaques and patches of varying extent. They appeared mostly upon the extensor surfaces, and she stated that a similar eruption had been upon the back, but that it had disappeared from this region about a month before. The individual lesions ranged in size from a quarter of a dollar to several inches in extent. In shape they were fairly round or oval, of a dull-brownish, or yellowish-red color, with rather sharply defined outlines and covered with thin, adherent scales. On the right forearm was an area about two inches wide by four long, of a deep venous-blood color, very soft to the touch but not raised above the general skin level. There were similar areas on the left breast and over the right elbow. These were tender but not painful unless touched. Their color did not disappear upon pressure. At this time the temperature was normal; pulse rate 96, respirations 24. She complained only of the itching and general weakness.

The diagnosis of mycosis fungoides was made, an opinion in which the members of The Chicago Dermatological Society, before whom the case was exhibited, concurred, and the patient was returned to her home for treatment. In November of the same year she returned with the conditions practically unchanged, except that the purplish areas had begun to develop signs of tumefaction, and the one upon the left breast was beginning to ulcerate.

A communication from her physician stated that she had had several courses of X-ray treatment, which had been carried to the development of a slight reaction each time, and that Fowler's solution had been pushed to physical tolerance several times. The X-ray had modified the itching somewhat but had not reduced the more prominently affected parts to any appreciable degree. Her general condition was very much worse than before, and she was advised to enter a hospital, which she did, and remained there bedridden until her death, which occurred the following February.

The X-ray treatments were continued as long as she was able to be moved from her bed to the operating room, but the results were far from satisfactory. Arsenic was again given by mouth as Fowler's solution, and hypodermatically as sodium cacodylate, but could not be tolerated in quantity sufficient to be of any value. Tonics of various sorts were given from time to time, but nothing affected the

course of the disease. During the last month of life the tumors developed rapidly and new ones appeared. One on the left elbow (Fig. 2), became the size of half of a cocoanut, causing considerable pain from pressure upon the underlying nerves, and another over the right eye closed that organ, and was accompanied by an annoying conjunctivitis. At this time all of the superficial lymphatics were enlarged but not tender, except one in the right axilla, which was the size of a hen's egg. When superficial ulceration of the tumors occurred, as it did several times, they breaking down and healing again under treatment, there was, of course, added discomfort in pain and tenderness.

Toward the end of life the entire skin, together with the sclera, became deeply jaundiced, and the site of innumerable minute capillary hæmorrhages. The pulse rate was now very rapid, reaching at times as high as 140 per minute. No pathological changes were found in the urine until a short time before death.

The blood count showed on January 31st, that is, three weeks before dissolution, 1,600,000 erythrocytes and 5,000 leucocytes, but the leucocyte count rose rapidly from this time on.

**AUTOPSY.** The autopsy was made by Prof. Zeit, the report of which is as follows:

#### A. EXTERNAL EXAMINATION.

Length of body, 150 cm. Development of skeleton, powerful. Musculature, well developed. Panniculus adiposus, moderate.

Skin. Color, generally jaundiced. Elasticity, slight. Pigmentation, bronze-yellow. Decubitus of left hip. Œdema of lower extremities.

Scaly eruption on forehead, shoulders, back, elbows, wrists, thighs and ankles. Great numbers of millet-seed-sized hæmorrhages, especially on abdomen, back, calves and thighs. Excoriations of right mamma, over right crest of ilium and external aspect of right elbow. Just below the left elbow (Fig. 2), there is a tumor, 12 cm. in diameter, round and subcutaneous. It shows an ulcerated surface of a dirty-brown color, and has no connection with the bone. Above the elbow are several circumscribed, subcutaneous nodules, of the size of a pigeon's egg. In the left axilla is a tumor, circumscribed, subcutaneous and of the size of a small apple. Cervical, axillary and inguinal glands all much enlarged. There is an old scar over the right mammary region and an open sinus near the right nipple discharging sero-sanguinolent fluid of a reddish-brown color.

Signa mortis. Algor mortis, marked; rigor mortis, marked; livores mortis, posterior surface of body. Putrefaction, none.

Eye. Cornea, turbid; pupils, dilated; sclera, icteric.

Extremities. The marrow of the humerus is red to reddish-brown.

#### B. INTERNAL EXAMINATION.

**THORACIC CAVITY.** Abnormal contents of pleural cavities: Left, 350 cc. of clear yellow fluid; right, 300 cc. of fluid of same character.

Sternum. Normal.

Mediastinum. Lymph nodes enlarged, soft, pale pink.

Pericardium. No adhesions, icteric, transparent. Contains a few cubic centimetres of bile-stained fluid. Moderate amount of subpericardial fat over right side of heart and along the base.

Arch of Aorta. Slight nodular arteriosclerosis.

Heart. Size of patient's right fist. Contents: right auricle, much dark blood, no clots. Right ventricle, very small amount of dark blood, no clots. Left auricle, dark fluid blood. Left ventricle, empty. Mitral orifice admits points of three fingers. Tricuspid orifice admits points of four fingers. Hydrostatic test of aortic and pulmonary valves, competent. Size of right ventricle, normal; thickness of wall, 3 cc. Size of left ventricle, normal; thickness of wall, 13 cc.

Endocardium of right ventricle, pulmonary valves, tricuspid valves: smooth, glistening.

Endocardium of aortic valves, slightly thickened along base.

Endocardium of mitral valves, yellow, thickened patches along base of valves.

Auricles normal.

Myocardium. Left ventricular wall and intraventricular septum tear easily.

Weight, 210 gm.; color, brown.

Lungs. Left pleura, smooth and transparent; old fibrous adhesions between visceral and parietal portions at apex. Location, normal. Size and weight, much increased; weight, 730 gm. Color, dark red; œdematous. Many small subpleural tumors; size, 2 to 5 mm. Lung floats in water. Moderate vesicular emphysema. Two brownish, circumscribed tumors, size of walnuts, in lower lobe. Three similar tumors in upper lobe. Lymph nodes, much enlarged. Right pleura, smooth and transparent; no adhesions; normal location. Small subpleural tumors. Weight and size much increased; weight, 960 gm. Slightly anthracotic. On section: Color, dark red, much foamy serum; markedly œdematous. Many small brownish tumors; size, 2 to 10 mm. throughout lung tissue. Bronchial lymph nodes, much enlarged.

ABDOMINAL CAVITY. Moderate amount of blood-tinged fluid. Position of abdominal viscera, normal. Condition of peritoneum, smooth and glistening. Appendix, normal. Height of diaphragm; left side, upper border of fifth rib. Right side, lower border of fourth rib.

Spleen. Weight, 1,120 gm. Much increased in size and weight. Capsule, smooth. On section; color, red; pulp, prominent; trabeculae, invisible. Many gray, pea- to millet-sized areas surrounded by hyperæmic zones.

Kidneys: Left, weight 140 gm. Capsule strips easily; consistency decreased; size and color normal. Cortex markedly swollen. Proportion of cortex to medulla, 1 to 2. Yellow striae radiating from pyramidal arches to surface of organ. Left adrenal, atrophic. Left ureter, normal. Right kidney has two ancient infarcts. Otherwise same as left kidney.

Sexual Organs. Vagina: normal. Uterus: small submucous fibroid, size of walnut. Endometrium: thickened and hyperæmic. Tubes: right side normal. Parovarian cyst of left side, 12 cm. in diameter; clear fluid contents. Left tube in wall of cyst. Ovaries slightly cystic.

Rectum. Normal.

Duodenum. Adherent to right lobe of liver. Ductus choledochus, patent.

Stomach. Distended. Greater curvature extends to umbilicus. Celiac lymph nodes enlarged. Pylorus and duodenum adherent to right lobe of liver. Contains dark-brown fluid, and stringy mucus. Its mucosa is thickened and hyperæmic. Biliary passages normal. Portal vein normal.

Gall Bladder. Thickened walls; empty. Adhesions to pylorus and duodenum. Hepatic nodes enlarged, one the size of a pigeon's egg.

Liver. Capsule thick. Size and weight much increased. Consistency increased; edges sharp. Measurements: Right lobe, transverse diameter, 22 cm.;



antero-posterior diameter, 25 cm.; thickness, 13 cm. Left lobe: Transverse diameter, 9 cm.; antero-posterior diameter, 13 cm.; thickness,  $6\frac{1}{2}$  cm.

On section: Marked nutmeg appearance, small amount of blood exudes. Grayish, small, millet-seed-sized nodules in great numbers.

Pancreas. Normal.

Mesenteric lymph nodes. Enlarged.

Small Intestine. Normal except enlarged follicles and Peyer's patches.

Large Intestine. Ascending colon distended. Hepatic flexure adherent to liver and gall bladder. Lymph follicles swollen.

Retroperitoneal lymphatics. Markedly enlarged.

Cysterna chyli. Normal.

Aorta. Nodular arteriosclerosis.

Vena cava. Normal.

### C. ANATOMICAL DIAGNOSIS.

1. Lymphatic leukæmia with marked hyperplasia of spleen, cervical, axillary, inguinal, mediastinal, bronchial, cæliac, mesenteric and retroperitoneal lymph nodes. Leukæmic lymphomata of lungs, skin, liver, spleen and intestines.

2. General jaundice.

3. Brown atrophy of heart.

4. Œdema of lungs.

5. Acute parenchymatous degeneration of kidneys.

6. Chronic gastritis.

7. Diffuse hyperplastic endometritis, submucous fibroid and parovarian cyst of left side.

8. Chronic cholecystitis.

9. Mycosis fungoides.

**BACTERIOLOGICAL EXAMINATION.** Smears made from the spleen, mediastinal and axillary glands, and from the large tumor mass over the left elbow, stained by Loeffler's methylene blue and carbol-fuchsin, and with Giemsa's stain gave negative results.

Cultures of spleen pulp, axillary gland and tumor mass, produced in twenty-four hours a slimy, grayish-white growth on blood serum mixture, and diffusely clouded bouillon.

Smears from cultures yield, from the spleen, organisms resembling the intestinal flora. From the axillary gland and tumor mass they simulate in appearance those from the spleen, and smears yield findings similar except in number of varieties.

The organisms preponderating in all cultures, are short, poorly staining, plump bacilli, decolorizing by Gram's method, and fermenting dextrose with the production of  $\text{CO}_2$  and  $\text{H}_2$ .

Plate cultures show colonies resembling those of *bacillus coli communis*. Grayish white, moist, entire edge, and granular content or structure.

Plates showed only one type of colony, and cultures from these yield colon-like growths in fermentation tubes and on agar.

Two Guinea pigs were inoculated, one with 5 cc. of an emulsion of spleen pulp, and one with 5 cc. of an emulsion of tumor pulp, by subcutaneous injection. The animal inoculated with emulsion of tumor tissue remained well. The pig inoculated with spleen pulp, developed within forty-eight hours a large abscess (3 by 2 cm.), the contents of which contained organisms resembling morphologically those found in the cultures, which were then further identified as *bacilli coli communis*, by cultures.

**HISTOLOGICAL EXAMINATION.** 1. Tumor of the elbow and skin. The circumscribed, ulcerated tumor of the left elbow (Fig. 3), shows a dense mass of lymphoid cells with a delicate fibrillar reticulum. It is richly supplied with blood which traverses the mass in channel-like openings, and by vessels having only an endothelial lining. The skin over the tumor is ulcerated, and the projecting tumor-cell-mass is covered by a dense layer of fibrinous exudate and necrotic cells. The neighboring skin (Fig. 4), is œdematous and hyperæmic. The upper layers of the cutis and the papillæ are densely infiltrated with lymphoid cells in the neighborhood of the tumor only. Some distance away from the ulcerated portion, the deeper layers of the skin and subcutaneous tissue show general, dense, diffuse lymphoid infiltration, the upper layers, including the papillæ, being œdematous and hyperæmic only, with here and there a small hæmorrhage.

2. Axillary lymph node. This shows the formation of new lymphadenoid tissue in circumscribed nodular masses, and a delicate fibrillar reticulum, the meshes of which are packed with lymphoid cells. The normal adenoid tissue structure has practically disappeared, and the follicles are small or absent. The lymph sinuses and trabeculæ are densely infiltrated with lymphoid cells.

3. Heart. This organ shows marked brown atrophy, and its vessels are surrounded with slight lymphoid cell infiltration.

4. Lungs (Fig. 5). The conditions here are marked hyperæmia and œdema. The bronchi and blood vessels are surrounded with dense mantles of lymphoid cells, and lymphoid plaques are found in the pleuræ.

5. Liver (Fig. 6). The periportal connective tissue shows everywhere a dense diffuse infiltration of lymphoid cells, which here



and there invade the peripheral zones of the acini. The liver cells show a slight degree of cloudy swelling, and the leucocytic infiltration accompanies the capillaries.

6. Spleen. This organ is also markedly hyperæmic, and its follicles obliterated. Irregular islands of densely packed lymphoid cells, with a delicate fibrillar reticulum, invade the pulp.

7. Kidneys. The lining epithelium of the uriniferous tubules is denudeated, necrotic and partially desquamated. Bowman's capsules are distended, and a moderate, diffuse infiltration by lymphoid cells is seen around the capillaries, veins and glomeruli, but this leucocytic invasion is not as great as that found in the liver. There is a moderate amount of hyperæmia. The adrenals show no abnormal changes.

8. Bone marrow (of humerus). Here it was found that mononuclear cells with homogeneous perinuclear protoplasm were greatly in excess. Few polymorphonuclears, but many erythroblasts, were seen.

9. Blood. This shows marked leucocytosis and lymphocytosis. A differential count taken from the veins of the tissue sections of the various organs gives: 93 to 96% of lymphocytes, and 4 to 7% of polymorphonuclear leucocytes. The proportion of erythrocytes to leucocytes in the blood vessels in the sections, was 20 to 1.

SUMMARY. In summing up the various features presented in the foregoing report, there can scarcely be any doubt regarding the fact that the case was clinically one of mycosis fungoides. All of the classical features of this disease as described by the numerous observers were present. The premycotic, or prefungoid stage was marked, and extended over a known period of at least two years. The lesions at this time were typical of the well-known erythematous form, and were accompanied by the usual intense pruritus. These were followed in the course of time by the formation of fungoid tumor masses on various portions of the body, and these had the aspect ordinarily described as that of small round-celled sarcomata, macroscopically, and which underwent the usual course of development, with occasional retrogressions.

The blood findings were those of a progressive anæmia until toward the end of life, when the characteristics of a lymphatic leukæmia were rapidly added, and dissolution followed.

The autopsy developed the findings of a person dead of lymphatic leukæmia plus the gross aspect of mycosis fungoides.

The histological picture presented in the skin, as well as in the various internal organs, and the tumor formations, differed in several respects from the majority of reported cases. The multiplicity of cell formation described by various observers, especially in the tumors, was absent, the pathological infiltration being made up wholly of mononuclear cells which had the typical aspect of lymphocytes. This hyperplasia of lymphoid cells was uniform, and was found wherever lymphoid tissue normally occurs.

The diagnosis of sarcoma cannot be considered as the local growths are multiple and benign, the capsules of the organs affected being nowhere broken through, and no primary, rapidly growing malignant growth was found.

In the skin the deeper tissues are not invaded by atypical proliferation of this hyperplastic lymphoid mass, the capsules of the hyperplastic lymph nodes are not broken through, and no diffuse infiltrating tumor masses extend into neighboring tissues. No giant cells were found. The spleen, lung, liver, and marrow changes also exclude sarcoma.

The argument that the case was one of true lymphatic leukæmia, or of Hodgkin's disease with peculiar skin manifestations that resembled those of mycosis fungoides, might be made: but as it was seen by a number of trained observers, this makes the fact patent, that we have here a pathological picture indistinguishable from mycosis fungoides in its external and clinical aspects, presenting post-mortem, macroscopically and microscopically, the picture of a lymphatic leukæmia.

Hodgkin's disease can be excluded by the fact that there was no increase of connective tissue in the lymph glands.

#### CONCLUSIONS.

Mycosis fungoides is an a-lymphæmic lymphomatosis (in Turk's sense) which toward the end may give the blood picture of a lymphæmic lymphomatosis, that is, a chronic lymphatic leukæmia.

It is, therefore, primarily a general disease of the hæmapoietic system, characterized by marked hyperplasia of lymphoid tissue wherever the same is physiologically present, presenting typical secondary lesions upon the skin, and is a pathological as well as a clinical entity.

## DISCUSSION.

DR. CORLETT said he was very much interested in this report, because it brought to mind a case he had at present under observation. The patient was admitted to the Lakeside Hospital last summer suffering from what appeared to be purpura, although the mucous membranes were not involved. Within a few weeks after admission there developed a ring-like eruption on the forehead which suggested syphilis. The blood showed no special changes upon repeated examination. About three months later, nodular changes began to appear on the skin of the hand, and finally one on the back. The diagnosis of mycosis fungoides was then made. The patient was subjected to the Roentgen ray treatment, and at present seemed to be entirely free from the disease. In the present case, the erythema referred to by Dr. Pardee was extremely dark—a venous erythema.

DR. SHERWELL said he had observed, in a number of cases of sarcomatosis and mycosis fungoides, that arsenic exerted a markedly beneficial influence on the disease, although other men, apparently, had not been so fortunate. The speaker said he had referred to this method of treatment in a paper on the subject published in the *American Journal of the Medical Sciences* in October, 1892.

He had in mind a case which he saw in connection with his colleague, Dr. Winfield, in which the diagnosis of eczema had been made. When Dr. Sherwell first saw the case, it still resembled a peculiar generalized eczema, but there were some peculiar features which soon led him to recognize the condition as mycosis fungoides. In this case, under the administration of arsenic and nux vomica, the eruption cleared up. The woman did remarkably well, and was now virtually free from the disease. In addition to the internal treatment, she also received five applications of the X-ray. Dr. Sherwell said he was convinced that arsenic was of great value in the treatment of this affection. He usually began by giving the drug in small doses, finally running it up to the point of tolerance. In the splenic and other forms of leukæmia the X-ray had apparently great influence, and in lymphatic disorders generally, and in mycosis fungoides of the form reported by Drs. Pardee and Zeit, X-ray treatment seemed to act very beneficially, particularly as to relief of the distressing pruritus often accompanying the eruption.

DR. FORDYCE said the great importance of this report was the light that it threw on the pathological classification of mycosis fungoides. From most of the text-books it was difficult to get any conception of where mycosis fungoides belonged, whether to the infectious granuloma, or to the sarcomatous or leukæmic group of skin diseases. The paper of Drs. Pardee and Zeit showed that it belonged to the latter; this was in accordance with the contention made by Paltauf, which he had recently reiterated. The findings of the authors of the present paper placed it definitely in that group.

DR. GOTTHEIL said that in a case of mycosis fungoides seen at the Lebanon Hospital in New York the autopsy showed all the organs studded with nodules, which were apparently purely sarcomatous. The pathologist could make nothing out of them but pure, round-celled sarcoma. These findings seemed to indicate that there were different pathological lesions which might give us the clinical features of mycosis fungoides.

DR. DUHRING said he had listened with interest to the report of the case of Drs. Pardee and Zeit; it belonged to a type of disease about which we had heard but little in connection with the subject, and it was therefore unusual. Furthermore, it illustrated the possible relation of skin lesions to general medicine, and was instructive for that reason, as well as for many others. The speaker said he regarded the term mycosis fungoides as an unfortunate one, and he regretted that it had been retained so long; it was simply based upon the external manifestations of the disease, being exuberant and fungoid, but not mycotic, and he



FIG. 1.  
Mycosis Fungoides.  
Showing the erythematous, prefungoid eruption. Taken two months before death.



FIG. 2.  
Mycosis Fungoides.  
Tumor over left elbow.





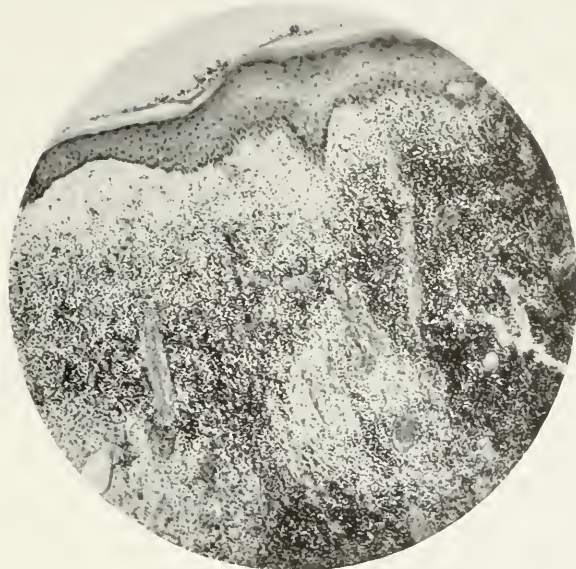


FIG. 3.  
Mycosis Fungoides.  
Section of skin near tumor of elbow.

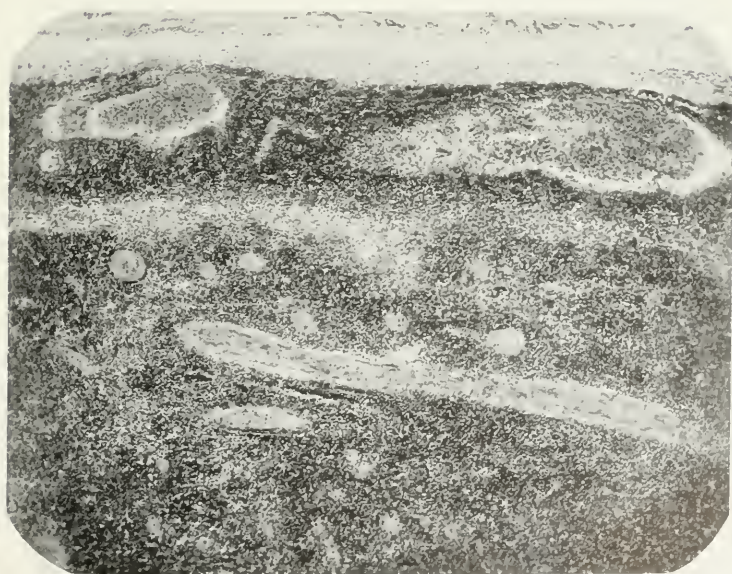


FIG. 4.  
Mycosis Fungoides.  
Section from tumor of elbow.







FIG. 6.  
Mycosis Fungoides.  
Section of lung, showing cell mantles.



FIG. 5.  
Mycosis Fungoides.  
Section of liver.



thought that the term granuloma fungoides, originally introduced by Auspitz, was simpler and non-committal as to its nature.

The lymphatic manifestations, which were often absent in the typical and more common cases of mycosis fungoides, were very prominent in the case reported in this paper. This rendered the case of much interest to the general practitioner and pathologist, as well as to the dermatologist. So far as he knew, Dr. H. G. Piffard was the first one in this country to call attention to this disease. In 1878, Dr. Duhring said, he himself had brought an instance of this affection (and the patient herself), before this Association at the meeting in Saratoga Springs; the case was that of a woman in whom the disease was very pronounced, who had been under his care for about a year, and who subsequently died. At that meeting, Dr. Piffard said he had seen one or two cases in New York, and he showed a photograph of a typical case. In his own case, Dr. Duhring said, the wall of the bladder was found to be involved with a neoplastic patch which was doubtless a manifestation of the same disease as that on the skin. No other internal lesions were found at autopsy. Dr. Duhring said that while itching was a common feature in the eczematoid form of the disease, in other forms, where the tumor formation predominated, itching might be absent. The speaker said that in the score or more of cases that he had seen, the disease had proved very variable in its course. There was one case which he was able to follow up for about twelve years. The patient was a woman in whom the disease was well developed when he first saw her, and from the extent of the lesions it seemed that she might succumb within six months. As a matter of fact, she lived fully ten years longer than he had expected she would.

As to the value of arsenic in this affection, the speaker's experience was similar to that of Dr. Sherwell: in several well-marked private cases he had seen very good results from arsenic; but not by the mouth, always hypodermatically. He recalled a well-marked case in a prominent man living in Texas who was kept alive for several years by the hypodermic use of arsenic. The X-ray was tried in this case with no effect whatever, and Dr. Duhring said his success with that agent in the treatment of this disease had not been so marked as that reported by some of his colleagues.

The case reported by Drs. Pardee and Zeit went far to join dermatology with general medicine. Kaposi once wrote to him to the effect that some of the cases the speaker had reported were sarcomatous, and he held that view during his life. Some of these cases, however, were strictly cutaneous, and could not be considered either lymphoid or sarcomatous in character. We had then, under the caption of mycosis fungoides, several forms of disease which could not well be classified under the same head, and which showed that the so-called mycosis fungoides was not in all cases precisely the same disease pathologically. The lymphatic system in some cases was greatly involved, in others it remained free of invasion.

DR. HYDE, after indorsing the remarks of Dr. Duhring, said that the post-mortem findings in the case reported by Drs. Pardee and Zeit were quite unusual, and had set a new record in connection with mycosis fungoides. He recalled the paper on this subject presented by the late Dr. Montgomery and himself, in which they reported about a score of cases. There were apparently different types of mycosis fungoides, and the last word on the subject had not yet been written. The pruritus, which was sometimes extreme during the prefungoid stage of the disease, might become less severe or disappear entirely during the later stage. In one case, which the speaker said he had already referred to at the last meeting of this Association, the patient had recently returned to his care, and was now in one of the hospitals in Chicago. In this case, the disease had made rapid progress during the past year, and the patient was now in a pitiable condition after one of the periods of improvement. The patient laid great stress upon the value of a

strong carbolic acid ointment, after the use of which he claimed that all his symptoms had disappeared. The temporary improvement was probably an illustration of one of those odd turns in the disease which so often occurred. Careful tests for possible errors of metabolism were being carried out. Under the scales of the lesions, enormous numbers of streptococci were found, and from these an autogenous vaccine was being made in the hope that its use might result in some good.

DR. RAVOGLI said he had seen only a few cases of mycosis fungoides, the first one being in the clinic of Prof. Billroth. That patient had been brought to the clinic to have one of these tumors removed, but when Billroth saw that there were so many similar growths present, he referred the patient to Hebra, and the diagnosis of mycosis fungoides was made.

Dr. Ravogli said he recalled one case which was referred to him by Dr. Ransohoff of Cincinnati, the patient having been referred to him for operation from Louisville. It proved to be one of mycosis fungoides. The patient was a woman whose general condition was very good. She did not suffer much from itching, but had several tumors which were red in color. She improved under the use of X-rays and the internal administration of cacodylic acid, but four or five years later there was a relapse, with fatal results. In another fatal case the tumors appeared with great rapidity, especially in regions of the skin where the itching was most severe. This patient was also a woman, and she died in consequence of her septic condition, with fever and exhaustion. It would seem, the speaker said, that this disease had different ways of appearing, and also various ways of running its course. In some cases it was of sarcomatous nature from the outset, while at other times the eczematous premycotic condition existed for a long time before the appearance of the tumors.

DR. STELWAGON said that an examination of the literature seemed to show that these peculiar sarcomatoid cases could be divided into three general groups: First, we had frank, generalized sarcomatosis, under which Kaposi placed all these groups. Then we had the cases of leukæmia and pseudo-leukæmia with cutaneous symptoms, to which the one reported by Drs. Pardee and Zeit seemed to be closely allied, and third, we had the cases of granuloma fungoides. The last certainly had seemed distinct from any leukæmic process.

The speaker thought that the cases reported by Drs. Pardee and Zeit, and two or three similar cases on record, did not prove that granuloma fungoides belonged to the leukæmic disorders, although suggestive of a family relationship.

Dr. PUSEY thought that while Dr. Stelwagon's remarks were pertinent, still this case apparently belonged to the type that we classified as mycosis fungoides. Furthermore, it showed a definite connection between mycosis fungoides and leukæmia. There were various varieties of mycosis fungoides, and it was also a fact that leukæmia was one of the most variable of diseases and that there was no sharp line between leukæmia and pseudo-leukæmia. One form might merge into the other, and further, there was no sharp distinction between pseudo-leukæmia and sarcoma.

DR. STELWAGON said that in going over the literature of granuloma fungoides recently, he had found on record only about four cases in which internal lesions were found.

DR. PARDEE said that while the case he and Dr. Zeit had reported pointed to the leukæmic type of mycosis fungoides, the question still remained, how were we to classify granuloma fungoides or mycosis fungoides clinically? There were three or four distinct types of this disease. First, we had the erythematous or eczematoid form; then we had the form known to the French as *tumeurs d'emblée*; third, we had the form associated with acute lymphangitis, and lastly, we possibly had to include the leukæmic cases with skin manifestations.



As far as the internal findings were concerned, the speaker said it seemed to him that a rather careful review of the literature on the subject indicated that this phase of the subject had not been thoroughly looked into in many of the cases that were on record; otherwise, perhaps, the association of the skin lesions with changes in the internal organs would have been more frequently found.

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## AN UNUSUAL CASE OF *TINEA VERSICOLOR*.

By ERNEST L. McEWEN, M.D., Chicago.

IT is generally considered that *tinea versicolor* is one of those cutaneous affections the clinical expressions of which very rarely deviate from a certain classical standard. The following case is reported, with photographic illustrations, for the reason that the writer believes it represents a very unusual type in this common skin disorder.\*

The patient was a man of twenty-seven with incipient tuberculosis of the lungs. He stated that the skin eruption had been present twelve years and that it had been seen by many physicians, one of whom had pronounced it syphilitic. It had never disappeared and there had been no recent treatment. Subjective symptoms were absent. The parts involved were the back from the shoulders to the buttocks, the chest and upper portion of the abdomen, the infra-axillary regions, the arms, especially the outer aspects, and the upper portions of the forearms. In places upon the arms and chest the appearance was quite typical of *tinea versicolor*; various sized areas, non-elevated, of irregular outline, brownish in color, slightly furfuraceous. Between these areas and upon the other parts affected, especially the back, the lesions were discrete, flat-topped papules, reddish-brown in color, hemp-seed to split-pea in size, follicular in location, usually pierced by a hair. The skin between the papules was normal. The elevation was distinct and could be readily seen with the eye and felt by the palpating finger. The impression given by a superficial examination of the skin was that a lichenoid follicular inflammation was present. The lesions of *pityriasis rubra pilaris* especially were suggested. The papules, however, could be removed with a curette; the skin beneath appeared pale and non-inflammatory, and the debris so removed showed under the microscope luxurious masses of the *Microsporon furfur*.

\*Because of the unusual features of the case the writer is pleased to be able to report that the patient was seen by Drs. James Nevins Hyde and Oliver S. Ormsby of Chicago, and the diagnosis confirmed by them.

The accompanying photographic reproductions show fairly well the general appearance of the eruption and the papular type of the individual lesions.

Regarding the question of elevation of the lesions in tinea versicolor, twenty-two text-books, representing the leading American, British, French and German authorities, were consulted. In ten of these no mention of elevation was found. In four, specific statements were made that the lesions were not raised, *i. e.*, "the patches are without elevation"; "do not project"; "are not raised"; "are not elevated above the skin." Eight of the authorities consulted speak of slight elevation, as follows: "edges are scarcely perceptibly raised above the surface"; "edges of patch may be somewhat raised, but the surface is not generally above that of the skin"; "patches are but slightly elevated"; "in some cases they show only slight elevation"; "around a lanugo hair, barely the size of a pinhead, slightly, if at all, elevated above the surface." This last condition suggests remotely the lesion present in this case.

An opportunity for microscopical examination of tissue was not available; the presence of a corneous layer of unusual thickness over the fungus mass was not, therefore, demonstrated. The existence, however, of such a retaining layer seemed probable, since the papules were firm to the touch and somewhat resistant to the action of the curette. Moreover, the production of a flat-topped papule by the development of the *Microsporon furfur* within the follicular orifice would necessitate a resistance to upward and lateral growth that can only be accounted for by the presence of a relatively firm cellular layer above and about the growing mass.

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## CASE REPORTS.

BY HENRY ROCKWELL VARNEY, M.D.,

and

R. C. JAMIESON, M.D., Detroit, Mich.

CASE 1; FIGURE 1. HEREDITARY SYPHILIS WITH UNUSUAL PIGMENTATION.

Ruth C, eleven years of age; unusually small for her age. She attends school and is above the average mentally. There is a history of specific infection which is verified clinically in both parents. The patient shows sabre-like tibiae, Hutchinson teeth, senile expression and



FIG. 1.  
Tinea Versicolor.  
Showing papular lesions.

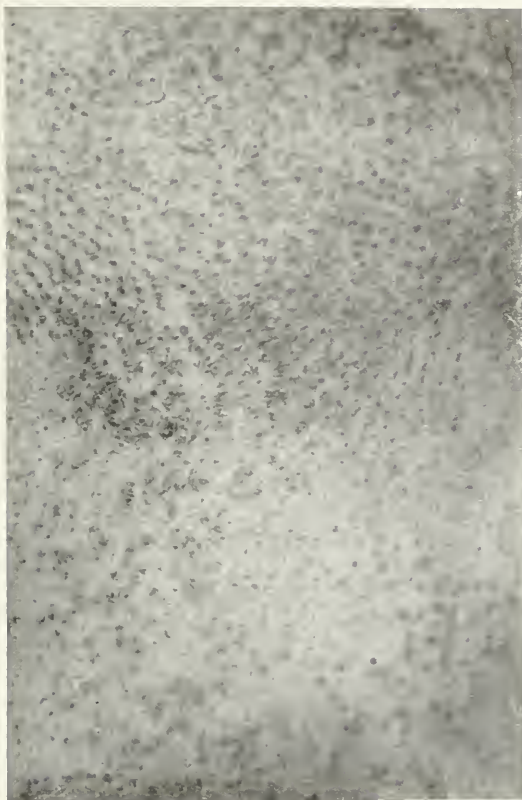


FIG. 2.  
Tinea Versicolor.  
Portion of Fig. 1, enlarged, showing  
elevation of lesions about the hair  
follicles.





other hereditary taints. The unusual pigmentation began at the age of two years and has increased gradually since. The pigmented areas do not fade during the winter months, the areas affected being the face, neck and arms, or only the exposed portions of the body. There is no scaling nor induration of the pigmented lesions. The patient is still under observation to determine whether the ultimate outcome of this unusual condition is to be xeroderma pigmentosum.

#### CASE 2. LICHEN ANNULARIS.

Miss M. B. R., twenty-four years of age. At present her general health is good. Three years ago the patient suffered a severe nervous shock while horseback riding, which confined her to her bed for six weeks. Five months after the severe fright, the patient developed on the right elbow and left knee, lesions of lichen which were distinctly circinate in their arrangement. The disease began as a small papule or nodule and slowly spread from the periphery, leaving the central area of the skin normal in all its appearance except for a distinct increased wrinkling. There are no subjective symptoms and no scaling. The lesions are more pigmented than inflammatory in color and are of a faint violaceous tint. The areas of selection have been the extensor surfaces around the joints, and the duration of the same lesions upon the areas affected has been over two years and a half. There has been no tendency to disappearance of any of the patches since their appearance.

This diagnosis was concurred in by Dr. George Thomas Jackson.

#### CASE 3; FIGURE 2. ERYTHEMA IRIS.

Miss F. M. C., twenty-seven years of age; a nurse by occupation. During her course of training as a nurse, and for the past four years, she has had extensive recurrent attacks of this form of erythema. During her second year of hospital work, her general health gradually declined and upon thorough examination, while no physical signs of tuberculosis were discovered, she showed a positive reaction to the tuberculin test (Calmette). As a child she was subject to epistaxis, and in early adult life she suffered from erythema during the cold months. The attacks of erythema iris, as shown in the accompanying plates, were from four to five in number annually, occurring more frequently and more severely in the cold months. The areas affected were the hands, both palmar and dorsal surfaces, the forearm, the mucous membrane of the buccal cavity and a few on the feet. The character of the lesions, their distribution, their development and

duration are that of the usual case of this type of erythema. The blood was normal in the differential count, but it was found to be slightly slow in its coagulability by Wright's test. The urine was normal. The therapeutic administration of calcium lactate in large doses at the beginning of an attack has been decidedly beneficial, diminishing markedly the severity of one attack, completely aborting the second, but it had no apparent effect in the third attack.

CASE 4; FIGURE 3. GRANULOMA ANNULARE (GALLOWAY).

Mr. J., fifty-eight years of age, in good general health. The unusual, exceedingly slow growing skin lesion as shown in figure 3 began as a minute, deeply colored papule. This papule, in the second month of its existence, while enlarging from the periphery, began to show a clear area in the centre of the lesion. The lesion as shown is of four months' duration, elevated one-sixteenth of an inch, the crest of the elevation being sharp and of a texture as firm as that of a wart and is pearly white. The patch is circular and presents a most clear and definite outline. The centre of the lesion has returned to a perfectly normal skin without atrophy. The elevated portion is of a dark red which shades to a violaceous coloring. The patient presented one other lesion and that was located on the dorsum of the right hand. The two patches remained at the size shown for a period of over six months, then under the administration of arsenic they gradually began to fade and disappear. No subjective symptoms were present and unfortunately a section for microscopic study could not be obtained.

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## SOCIETY TRANSACTIONS.

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### NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, May 24, 1910.

DR. SAMUEL SHERWELL, *President*.

**Congenital Diffuse Keratosis.** Presented by DR. GEORGE HENRY FOX.

The patient, a baby from the Skin and Cancer Hospital, presented much the same appearance as a boy reported by Dr. Fox in 1884, who was known as the "alligator boy." He was born in Canada, and at birth his skin was almost like a coat of armor. Instead of peeling off, as these



FIG. 1. CASE I.

Hereditary Syphilis with Unusual Pigmentation Beginning at Two Years of Age.





FIG. 2. CASE 3.  
Erythema Iris.



FIG. 3. CASE 4.  
Lichen Annularis.





cases usually did, the skin remained for some time in the original condition. This child when first seen had been treated with mercurial ointment and the skin was somewhat discolored, but it had since been treated with glycerine and water and had cleared up a little.

DR. WINFIELD said that it was not so serious a case as one he had reported some years ago. That baby died when five weeks of age.

DR. SHERWELL said that he had presented a case similar to, and even exceeding, this in severity to the Society at its meeting in February, 1894, and also at the April meeting of the same year. (*Jour. Cutan. Dis.*, Sept., 1894.) His case had enormous rhinoceros or lizard-like plaques; it improved for a while under treatment, but eventually died at about the sixth month. The mother, apparently a healthy woman, had already had two sound and healthy children. Two or three years afterward she gave birth to another similarly affected infant. The child came under his and Dr. Winfield's observation. It was not quite so severe a case as the first, but nearly so; this one also died in a few months. Dr. Fox's case would seem from inspection to be of a more particularly sebaceous type than the ones just referred to. Dr. Sherwell said that the worst case of diffuse keratoma that he had ever seen was in a child born at the Foundling Asylum and reported by Dr. Wheelock. He saw it a few hours after birth. The scales were yellow and as hard as a coat of armor. This horny integument split in the median line and elsewhere and some of the scales came off like clam shells, leaving the skin bright red, like a patch of eczema rubrum.

The "alligator boy" interested the speaker so much that he wrote to Canada to the doctor who had delivered the child, who replied, giving a very interesting account of the appearance of the skin at birth. It was almost similar to Dr. Wheelock's case. All the plaques peeled off, leaving the skin soft and red, and every year these thick plaques would recur and present an appearance suggestive of an alligator. The imaginative father said that the child was delighted when he saw water and crazy to get into it. This was the worst case of keratoma he had ever known to live and grow up. At the time he first saw the case the child was five or six years old. The case shown to-night had a dry skin at birth, and if the members could have seen it then they would not have doubted that it was a true case of congenital keratoma, but later the plaques peeled off and left the skin in better condition. It had been greatly changed by mercurial ointment applied by some one under the impression that it was a case of syphilis.

#### **Dermatitis Herpetiformis.** Presented by DR. KINGSBURY.

The patient was a well-developed young man, twenty years of age. He had had the disease for over a year and when presented the case was of interest only on account of the symmetrical distribution of the groups of lesions on the back.

#### **Chronic Eczema or Mycosis Fungoides (?).** Presented by DR. GEORGE HENRY FOX.

The man presented a number of dark, roughened patches upon the trunk and extremities which were suggestive of an early stage of mycosis, but Dr. Fox regarded the eruption as eczema of a chronic type though not of long duration.

DR. KLOTZ said that it seemed to him to be a case of dermatitis herpetiformis.

DR. BULKLEY said that these cases were difficult to diagnose so early. Some months ago he had presented before the Society a very early beginning mycosis

fungoides. At that time there was some question about the diagnosis, but it was later confirmed by several of the members, and the patient died about two months ago. The disease progressed with terrible rapidity and the patient was a sight to behold. He was hopeful to the end, but passed off very suddenly. There had been two such cases in the hospital very recently, one was a private case and the eruption was very general. In the latter one, few would have made the diagnosis early, but the disease progressed rapidly toward the end. He was in the hospital for six or eight weeks. Dr. Bulkley had recently made the diagnosis of mycosis fungoides in two cases recently shown at the Bristol Medical Association in London. They were shown as some peculiar lesion, and he was much pleased with the confirmation of his diagnosis by Dr. Unna. From the lesion on the shoulder, in the present case, it would not be surprising if it turned out to be mycosis.

DR. TRIMBLE said that when the man first presented himself for treatment at the hospital these two diagnoses were suggested, chronic eczema and mycosis, and there was a strong suspicion that it was a beginning mycosis. The man had improved very much under treatment at the hospital.

DR. FOX said that he hoped to present the patient at a subsequent meeting entirely cured.

#### **Scleroderma. Presented by DR. GEORGE HENRY FOX.**

The patient was a man thirty-eight years of age, who presented a scleroderma of the toes, especially of the right side, of the sclerodactylia type. There were no associated symptoms of Raynaud's disease. The patient was small, under-developed, with a weak voice, and of the feminine type. He presented a vitiligo of portions of the toes and elbows. The presence of the thyroid gland could not be made out by palpation. Dr. Fox said that the case would be more interesting to the neurologist than to the dermatologist.

#### **Scleroderma. Presented by DR. GEORGE HENRY FOX.**

The patient was a Russian woman, forty years of age. The lesions upon the feet first appeared two and a half years ago. Those upon the trunk were first noticed six months later. The eruption consisted of localized patches of scleroderma upon the dorsal surfaces of the feet and upon the chest and upper portions of the back. Peculiar band-like lesions were seen running over the left supra-clavicular region.

DR. JACKSON said that the band on the anterior part of the chest was the most remarkable feature of this case, as it extended straight across the top of the chest from side to side. It was hard to reconcile its occurrence with any theory of nerve or vascular influence.

DR. HOWARD FOX said that an inquiry had been made regarding the possibility of continuous pressure over the shoulder as that from some bandage or strap. No such history could be elicited.

DR. GEORGE HENRY FOX said that he could only repeat a remark Dr. Bulkley had just made about the absence at our meetings of typical cases of morphea. In the early days of the Society it was not infrequent to see cases of round, shiny patches mortised into the skin as it were, but lately he had not seen the typical cases as originally described.

DR. WINFIELD said that he had had one of the typical morphea cases within the last year.

**Erythroderma Perstans.** Presented by DR. BULKLEY.

The patient, Ethel Lees, had been shown repeatedly before this and other societies, without a definite diagnosis being agreed on. No early history had ever been learned, as she was a homeless waif, who had been kept in the hospital a long time, as she could not be taken into another institution on account of her skin trouble. When she first came to the hospital there was such a darkened, horny condition of the skin in front of the axilla that the case was entered as one of *acanthosis nigricans*. But under active treatment most of this condition passed away, and for a long time she had exhibited on the body and extremities irregular patches of reddened skin, which would come and go after remaining for weeks. These often assumed fantastic shapes, and when not treated locally with baths and ointments would become more or less covered with ichthyotic processes. Another interesting feature was that after the trial of most varied internal remedies for long periods, the condition had improved materially under large doses of tincture of *nux vomica*. Beginning with five drops after meals she had gradually increased the dose until now she was taking forty drops of the tincture three times daily.

DR. HOWARD FOX considered the case to be one of so-called congenital ichthyiform erythroderma described by Brocq. *Acanthosis nigricans* he thought could be ruled out. *Pityriasis rubra pilaris* had formerly been suggested, but as the case had never had any papules, this diagnosis seemed untenable. Dr. Jackson had reported a somewhat similar case from his service at the Vanderbilt Clinic.

DR. GEORGE HENRY FOX said that he had seen the case before and had never noted any suggestion of true ichthyosis. When presented, he was struck by the resemblance of some of the patches to lichen ruber or *pityriasis rubra pilaris*, especially those on the back of the neck. Other circumscribed patches about the elbow and elsewhere were strongly suggestive of the squamous and rugous forms of lichen ruber, but he had never seen a case of this disease in which there had not been at some stage the peculiar scale-tipped papules.

**Papular Eczema (Prurigo ?) on the Arms and Face.** Presented by DR. BULKLEY.

Annie Daily, fourteen years of age, had had a most obstinate eruption confined to the face and arms for many years. Under different treatments the eruption had at times about disappeared, but recurred in great severity. The itching was often most severe, causing her to scratch often at night, in spite of good dressings, greatly aggravating the eruption. When presented, the eruption was very severe; the face was pretty well covered with solid papular lesions, with some also scattered over the neck. The arms were also covered with scratched papular lesions. There was no eruption on the body or legs.

DR. HOWARD FOX thought it looked like dermatitis herpetiformis.

DR. KLOTZ agreed with Dr. Howard Fox.

DR. BULKLEY said that if he remembered correctly, some of the members a year ago suggested prurigo.

DR. GEORGE HENRY FOX said that its chronicity, tendency to relapse and its pruriginous character, would seem to indicate dermatitis herpetiformis.

**Lupus Erythematosus of Very Long Standing and Great Severity  
Treated Successfully with Solid Carbon Dioxide.** Presented  
by DR. BULKLEY.

Mary Ryan, forty-five years of age, first noticed a pea-sized, red, scaly, patch on the right cheek thirty years ago. In spite of careful and varied treatment the disease had extended with some cicatrization until the entire face and scalp were involved. For several months past the solid carbon dioxide had been applied many times to small areas, with the result that now most of the surface presented a very satisfactory, superficial cicatrization, flexible and of good color. The reaction from the snow had been good, a bulla often forming, and when this had dried down, and the crust fallen, the patch was apparently well.

DR. GEORGE HENRY FOX said that he remembered showing the case twenty years ago, when there were but a few typical patches on the face. It had spread gradually, until cicatricial tissue now was seen all over the face.

DR. TRIMBLE, referring to the solid carbon dioxide treatment, said that he thought it a very good thing for a few patches, but that he did not see how it would benefit this woman very much, as the lesions completely covered the face.

DR. BULKLEY said that the woman was very much better now, indeed she was almost well. She had had some thirty or forty applications.

**Morphœa.** Presented by DR. DADE.

The patient was a woman who had been presented a year and a half ago with a morphœa lesion on the left side of the face. She had since developed a plaque on the thigh. She had lost a great deal of flesh. The plaque on the face had now disappeared. The patient was presented for suggestions as to the nature of the lesion on the thigh.

DR. KINGSBURY said that the present lesions on the thigh might be accounted for by the varicose veins, but he was at a loss to understand the disappearance of the very peculiar lesion that was on the face when the case was last shown.

DR. BRONSON said that he had not seen the lesion on the face, but that he failed to see any connection between the thickening on the legs and the erythema induratum of Bazin.

DR. DADE said that he had presented the patient with a question as to what the lesion on the leg might be, and had not meant to infer that it was erythema induratum of Bazin.

REPORTS OF CASES PREVIOUSLY PRESENTED.

**Urticaria Pigmentosa.** Reported by DR. HOWARD FOX.

DR. HOWARD FOX reported upon a case previously shown before the Society by Dr. George Henry Fox as one of probable urticaria pigmentosa. A differential blood count which had recently been made showed the following: Polynuclears,

42.6%; transitionals, 4.6%; lymphocytes, 48.2%; large mononuclears, 3.4%; eosinophiles, 1.2%; mast cells, 0.0%.

The absence of an eosinophilia, Dr. Howard Fox thought, was in favor of the diagnosis of urticaria pigmentosa and would tend to rule out the diagnosis of dermatitis herpetiformis that had been made by some of the members.

**Leprosy.** Reported by DR. JACKSON.

Dr. Jackson said that his case of leprosy was doing very well on chaulmoogra oil, and was looking and feeling better in every way. The doses had been gradually increased.

**Onychogryphosis Congenita (Wax Model).** Presented by DR. HOWARD FOX.

Dr. Howard Fox presented a wax model of a case of onychogryphosis congenita, the patient having been demonstrated at a previous meeting of the Society.

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PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building, on April 11, 1910, DR. CHARLES N. DAVIS, *President*.

**An Extensive Case of Xanthoma.** Presented by DR. HARTZELL.

The patient exhibited was a woman of healthy appearance, fifty years of age. Two years ago vasomotor symptoms developed, with paroxysmal flushing of the hands, burning and pain, at times, being extremely marked. Some time later xanthomatous lesions appeared in the shape of flat infiltrations on the furrows of the palms and the fingers. Pea-sized nodules were noted on the backs of the fingers in the regions of the joints. One nut-sized tumor was observed on the point of the left elbow. Similar lesions developed in the clavicular region. The usual type of flat, chamois-color nodules were noted on the eyelids. The patient when presented suffered from "dead-fingers." There was a marked arthritis deformans. Hypertrophic cirrhosis of the liver was also present. The patient was referred by Dr. H. McVeagh Brown.

**Alopecia Areata, Dystrophia Unguis, Fibrous Nodules of the Ears, and Deformity of the Lower Jaw.** Presented by DR. KNOWLES.

The patient, a man of twenty-eight, gave the history of having been operated upon for an abscess of the submaxillary bone, at four months of age; since that time there had always been a lack of development of the left submaxillary bone, with marked protrusion of the teeth of the upper jaw, and imperfect approximation of the upper and the lower rows of teeth. The hair since birth had always been quite thin, and at ten



gree. Four years ago several new spots of alopecia areata appeared, others developing within the last six months. The scalp was now covered by less than one-half of the normal quantity of hair. Six years ago curious, large pinhead-sized, yellowish, probably fibrous nodules attacked the lobes and conchæ of the ears. The patient was referred by Dr. Clifford Farr.

DR. HARTZELL said that he had seen several patients with these fibrous nodules of the ears, but without the accompanying dystrophic condition of the nails and the alopecia areata.

**Case for Diagnosis.** Presented by DR. STELWAGON.

The patient was a physician aged forty years, with pea to half-dollar-sized, deep-red, slightly scaly and irregularly nodular patches; with here and there, in the larger areas, distinct atrophy or scarring. The nodules, or tubercles, were small (pinhead to French pea-sized) and ill-defined. In some there was slight crusting in spots; in three or four, quite decided crusting. A few patches roughly resembled those of psoriasis of a seborrheic type; a few were slightly suggestive of both lupus and tubercular syphilis; and several more strongly indicative of epithelial changes. In some there was slight infiltration, especially about the border or portions of the border. There were some scattered, small, pigmented spots and keratoses. As a whole, the case presented a moderate similarity to that of an abundant keratosis senilis, and to a less extent, to that of xeroderma pigmentosum. The lesions were in all about sixty to eighty in number, and limited to the trunk, the upper arms and the legs. The face was not involved, nor were the palms and soles. One of the patient's brothers died of tuberculosis and another of pneumonia. The patient was spare, and about fifteen to twenty years ago took a moderate arsenical course for several months for asthma. The lesions began to appear about nine to ten years ago.

DR. HARTZELL said he thought the condition resembled markedly that found in keratosis senilis. He referred to a patient whose eruption bore a considerable resemblance to the present case.

DR. STELWAGON said the diagnosis probably lay between tuberculosis and lues.

DR. SCHAMBERG suggested arsenical keratosis with epitheliomata.

**Lupus Vulgaris in a Girl of Six Years.** Presented by DR. STOUT.

A stout, healthy looking girl of six years was exhibited; the patient's and the family history were negative for tuberculosis of constitutional type. Four years ago a small pinhead spot appeared on the centre of the right cheek. When presented there were three typical, confluent, lupus nodules, forming a patch, large pea in size, on the right cheek. The other children in the family had not been attacked by the disease.

DR. HARTZELL referred to a patient that he had recently examined with recurrence of lupus nodules in the stitch holes, following an operation for the removal of a patch of tuberculosis of the skin.

**Scleroderma in a Boy of Three Years.** Presented by DR. DAVIS.

Three months ago, the little patient was attacked by the present disease. The board-like hardness first developed in the right iliac region, the morphœa-like patch was three inches long by one inch wide, with faint capillary blood vessels radiating from the yellowish-white centre. There was another patch, irregular in outline, three by one and one-half inches, on the right upper thigh. Diffuse sclerodermic areas were noted, involving fully one-half of the right lower leg and foot. Because of the "hide-bound" condition the knee and the ankle could be but slightly moved by the patient. Some of the patches had the violaceous border as seen in morphœa. The rest of the body was normal in every detail, being well formed and of unusually good musculature. The disease was strictly limited to the right iliac region, the right thigh, the right leg and the foot.

DR. HARTZELL said that one could hardly doubt that some derangement of the underlying nerve was the cause in some of these cases. The speaker referred to one of his patients who had had a patch of this disease under her breast which disappeared during pregnancy.

DR. SCHAMBERG mentioned a case of scleroderma following an injury to the shoulders.

DR. STOUT detailed the history of a patient with unilateral scleroderma of the head.

**Atrophic Condition of the Hand and Arm.** Presented by DR. DAVIS.

The patient exhibited by Dr. Davis was a woman of thirty-three, who gave the history of having had the present condition for eight years. The skin of the right hand was of a dusky-red color, glazed, glossy in appearance, and was extremely wrinkled (like an extremely old individual); there was no infiltration or thickening; the natural lines and the furrows were obliterated on the dorsum of the hand. The phalangeal articulations were all enlarged. There was a marked hyperidrosis of the palms of both hands. The atrophic condition of the skin was also noted on the right arm, extending to the elbow. No cause for the condition could be ascertained.

DR. SCHAMBERG referred to the fact that most atrophic conditions of the skin were symmetrical.

**Case for Diagnosis.** Presented by DR. KATZENSTEIN.

A boy of nine years was exhibited by Dr. Katzenstein. Four weeks ago a lesion appeared near the tip of the tongue, which had become gradually harder (according to the history of the patient's family) and larger until it was now densely indurated, the size of a large pea, with a depressed centre. General adenopathies were present. Within the last day or so an eruption had appeared on the trunk. The lesions were pinkish-colored, split-pea and larger macules; some were apparently

becoming annular and very slightly raised. The eruption lacked the uniformity that would be expected in lues. The face and the lower extremities were free.

Those present agreed that the case was suspicious of syphilis and should be carefully watched.

DR. HARTZELL said that because of the lack of uniformity in the eruption he thought syphilis could be excluded. The developing eruption he believed was pityriasis rosea.

### Palmar Keratoses, with Eczema of the Fingers. Presented by DR. SCHAMBERG.

The patient, a male of thirty-two years, was employed in the hardest kind of manual labor. Three weeks ago small keratotic areas developed on the posterior portions of the palms, resembling somewhat the condition found in beginning arsenical keratosis. There was also an eczema on the fingers. No other eruption was found on any other portion of the cutaneous surface. Arsenic had not been taken.

### Lupus Erythematosus. Presented by DRS. STELWAGON and STOUT.

A woman, twenty-one years of age, born in Poland, was exhibited with symmetrical lesions on the cheeks, and a quarter-dollar-sized area on the scalp. The patches were from split-pea to silver-dollar in size, and the first appeared six years ago. The forehead and the nose were also attacked. The lesions were absolutely typical.

DR. STOUT said that in four of his twenty-five cases of erythematosus lupus albumin had been present in the urine.

DR. SCHAMBERG said that he thought the present vascular type of the disease was the most difficult to successfully treat.

### Epithelioma in a Woman of Twenty-one Years. Presented by DR. SCHAMBERG.

Three years ago a lesion was excised from the right side of the forehead, at the age of eighteen years; recurrence occurred six months later. When presented there was a quarter-dollar-sized, annular lesion, at the site of the former growth, the centre was somewhat depressed, and around the circumference were several pearly, pinhead-sized nodules. No history could be obtained of a mole antedating the original growth.

DR. DAVIS said that the picture exhibited, taken three weeks ago, resembled markedly benign cystic epithelioma.

DR. SCHAMBERG referred to a recently reported case, of an epithelioma developing in a mole, in a boy of almost the same age as the present patient.

### Acne Agminata (Acnitis). Presented by DR. STELWAGON.

A healthy looking man of forty-nine years, an engineer, was exhibited by Dr. Stelwagon. Eight weeks ago the present eruption appeared, being limited to the face, scalp and the neck. Most of the lesions

were acuminate papules, some were, however, flat, with a slight scale on the surface. The eruption was from pinhead to pea in size, and of a dark-red color. There was a marked tendency to grouping in the neighborhood of the eyelids and the nose. As the lesions disappeared considerable scarring would remain. The glands were not enlarged. A small white patch was noticed on the right tonsil.

DR. SCHAMBERG believed that syphilis could be excluded, as the eruption was limited to the face and the neck.

DR. HARTZELL thought that syphilis was a probability.

DR. STELWAGON considered the case one of *acne agminata*.

#### **Papulo-Necrotic Tuberculide.** Presented by DR. DAVIS.

A male of twenty-six years, gave the history of having had the present condition for thirteen years. His grandfather died of tuberculosis, and one sister had a cervical adenitis. Nine years ago the left supra-clavicular glands broke down. The patient had one hundred or more active pea to pinhead-sized lesions on both forearms, a few on the dorsal surfaces of the hands and the fingers, the elbows, the upper arms, the trunk and the lower extremities. The face was free. There was a considerable amount of scarring, particularly in the neighborhood of the elbows, where there was also a tendency for the active lesions to become confluent. Most of the lesions showed typical necrotic centres. Several one-quarter-dollar-sized scars were noticed on the anterior and posterior portions of both lower legs, resembling those following *erythema induratum*. The right axillary glands were markedly enlarged.

DR. SCHAMBERG thought the case resembled somewhat *acne scrofulosorum*.

#### **Hyperæsthesia Following Zoster.** Presented by DR. KNOWLES.

Fourteen months ago a male of sixty-three years had a severe attack of zoster of the right side of the neck. Ever since that time the slightest touch, even the contact of the air, would produce a constant tingling, and the sensation of pins and needles in the right side of the neck, from above the ear to the clavicle. Neuralgic pains would keep the patient awake the greater part of each night, and life had practically become a torment. Although treated by several physicians and with almost every remedy internally and a great many external preparations the condition had remained practically stationary.

#### **Tertiary Syphilis Resembling Eczema.** Presented by DR. SCHAMBERG.

A woman of fifty had an eruption just above the left ankle, of one year's duration. The eruption resembled markedly an eczema, and consisted of a band one-half inch wide which encircled two-thirds of the circumference of the left lower leg. Below this lesion there was another linear, infiltrated patch, of a dark-red color, of the same appearance as the first. Pruritus was markedly present.

**Syphilitic Gumma (?)**. Presented by DR. STELWAGON.

The case was presented because of the fact, that, five weeks before the patient came under Dr. Stelwagon's observation, a hen's-egg-sized tumor, probably a gumma, had been incised by another physician. According to the history, the patient, a male of twenty-six years, had been having growths of this character for the last five years. Like so many histories, the details were almost impossible to obtain accurately. At the time of presentation there was a silver-dollar-sized patch on the left side of the neck, resembling a syphilitic eruption.

**Tinea Sycosis**. Presented by DR. FINCK.

A male, born in Italy, forty-five years of age, was exhibited with an eruption of two weeks' duration, limited to the bearded region and posterior surface of the neck. Large pigeon's-egg and smaller, fluctuating tumors were present. There was distinct hair loss. The upper lip had not been attacked. The patient did not work among horses or cattle.

**Case for Diagnosis**. Presented by DR. SCHAMBERG.

According to the history of the patient, a male of twenty-six years, a boil-like lesion first appeared about one and one-half years ago, below the right lower eyelid. A short time after the appearance of this lesion, about one month, an incision was made and the contents carefully removed. The lesion promptly relapsed, became larger, and sometime afterward a second operation was performed, the bone being scraped, and the antrum was opened and drainage was made through the mouth. There was, at the time of presentation, a silver-dollar-sized lesion below the right eye with a raised border and a depressed central opening which lead down, probably because of the operation, to the mouth. Necrosis of the bone was found at the time of the second operation, according to the patient, and hence the radical procedure. There was a sero-mucoid discharge from the lesion. The patient stated that the lesion had been entirely without pain, until the last operation had been performed, but since then there had been great suffering. A Gram negative bacillus was found in smears.

DRS. STELWAGON and HARTZELL thought the history and the character of the present lesion spoke very strongly for syphilis.

DR. SCHAMBERG said that he had thought of the possibility of sarcoma of the antrum.

**Hæmorrhagic and Gangrænous Varicella, Ending Fatally, in a Child of Two and One-Half Years**. Photograph presented by DR. KNOWLES.

The eruption started like the usual type of varicella, excepting that the exposed portions of the body were markedly attacked, the face,



the scalp, the neck, and the dorsal surfaces of the hands showing unusual involvement. The trunk was almost entirely free, excepting for the marked eruption on the buttocks. The lower portions of the legs and the forearms showed a profuse outbreak. A few hours after the typical varicella vesicles appeared the contents became hæmorrhagic and as these dried up gangrænous areas developed. Fresh crops of typical vesicles appeared during the course of the disease, the lesions all undergoing the same process. Vesicles also developed on the mucous membrane of the tongue, the cheeks, and the palate, becoming in a few hours filled with blood. The child died after four days' illness. Dr. Judson referred the patient. The case was to be reported in detail at a later period.

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

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## BOSTON DERMATOLOGICAL SOCIETY.

February Meeting, 1910.

DR. J. H. McCOLLUM, *Chairman.*

### Hodgkin's Disease. Presented by DR. C. J. WHITE.

A married woman, aged thirty-six, presented a generalized dark café au lait pigmentation. For fifteen months there had been wide spread pruritus, nausea, headache, and persistent cough, which had varied in intensity from time to time. Scattered over the body, but most conspicuous on the extensor surfaces of the arms, were excoriated papulo-vesicles intermingled with round scars. Over the back were numerous excoriations especially accentuated on the shoulders and sacrum. The general discoloration of the skin, most marked at the axillæ and areolæ of the nipples, dated back two months; and at the time of its appearance the woman had been taking Fowler's solution.

The patient had had rheumatic fever and at one time had noted a slight pain in the back, running from the scapulæ to the lumbar region.

Physical Examination: Weight 118 lbs., pulse 80, blood pressure 180, hæmoglobin 85%, polymorphonuclear leucocytes 86%, lymphocytes 13%, eosinophiles 1%; leucocytosis absent; urine normal.

On both sides of the base of the neck, especially on the left side, were freely movable masses of glands, not tender on palpation. In the axilla there was a gland the size of a walnut. There were palpable inguinal glands, but the spleen was apparently of normal size. On percussion, substernal dullness was noted, extending 10 cm. beyond the sternal borders on either side, together with slightly diminished resonance. Respiration was somewhat lessened on the left side.

X-ray examination revealed an extensive mediastinal growth, 16 cm. in width, at the level of the second rib and extending up above the clavicles and merging below with the heart shadow.

Histological examination of a piece of one of the cervical glands showed a lymphoma to be present. Histological examination of an excised papule of the skin showed an epidermis containing much yellow-brown pigment in the germinative layer, a practical absence of the granular layer, an occasional focus of parakeratosis and a generalized, mild hyperkeratosis. In the corium appeared a slight perivascular exudation with an occasional chromatophore around the subpapillary vessels, but most conspicuous was the disorganization of the cellular protoplasm of the sweat glands and their surrounding elastic envelopes. As a whole the sections stained in a diffuse manner, suggestive of general œdema.

Dr. White's diagnosis was accepted. Dr. Burns remarked that the pigmentation and extensive excoriations together with the intense pruritus at one time strongly suggested the presence of pediculosis vestimentorum; subsequent observation, however, disproved this supposition. Dr. C. J. White stated that considerable amelioration had occurred from X-ray treatment; the glands had markedly diminished in size. The dyspnoea and cough had subsided, and the skin irritation had ceased to cause much discomfort.

#### Recurrent Vesicular Eruption. Presented by DR. POST.

A young woman, aged twenty-three, had had recurrent outbreaks of an eruption of vesicular character on the palms, flexor surfaces of the arms, corners of the mouth and plantar surfaces of the feet. The lesions were sparsely disseminated, pea-sized vesicles, apparently deep seated and with indolent corneous surfaces. The patient stated that the eruption had recurred for several successive winters, always disappearing with the approach of warm weather. So far as could be seen the lesions healed without cicatrices.

The winter form of *hydraea aestivale* and recurrent *erythema multiforme* were the affections chiefly considered. Against the latter diagnosis was the long, indolent course of the outbreak; each attack lasting from one to several months. Dr. Haines wished to consider the possibility of *hidradenitis suppurativa*. Dr. Burns thought *dysidrosis* should also be included among the differential possibilities.

#### Morphœa. Presented by DR. SMITH.

The patient showed several circumscribed areas on the left pectoral region and flexor surface of the left forearm.

The case was regarded as one of morphœa or circumscribed scleroderma.

#### Psoriasisiform Syphilide. Presented by DR. SMITH.

Psoriasis-like lesions were present on the arms, trunk and calves of the legs, very sparsely distributed. By artificial light the scaling papules seemed indistinguishable from psoriasis. Dr. Smith stated that the patient presented a specific history and that by daylight the scaling

papules were of deeper color than one would expect in psoriasis. Coincidentally the patient had a rosacea which had been aggravated by potassium iodide, and an unmistakable iodide acne.

On the appearances by artificial light the resemblance to syphilis was not marked. Dr. Post, who had also observed the patient by daylight, considered, with Dr. Smith, the patient to be syphilitic.

#### **Tinea Trichophytina of the Beard.** Presented by DR. HOWE.

A man, aged fifty, showed a diffuse follicular eruption of the bearded region. The present affection had existed six weeks. The patient said he had had a similar outbreak on the beard two years ago which lasted six months. The entire bearded region was involved. There was also present a suppurative blepharitis. The affected surface of the face was reddened, somewhat brawny and the seat of profuse, small follicular pustules. From the pus the *Megalosporon ectothrix* had been detected.

Since Dr. Howe had made a microscopic diagnosis the nature of the process must be beyond question. On clinical grounds, however, it was thought very unusual for the process to be so high up on the face and the typical fungating-like lesions of sycosis were conspicuously absent. The blepharitis could only be regarded as accidental. Dr. C. J. White and Dr. Burns questioned the diagnosis on clinical grounds and considered the possibility of a coincident pyogenic folliculitis and trichophytosis in the same subject.

#### **Gumma of the Cheek.** Presented by DR. BURNS.

The patient was an Italian, forty years of age, with a large ulcerating gumma over the left zygoma. He was seen six months ago by Dr. C. J. White who advised him to enter the ward for skin diseases at the Massachusetts General Hospital, but instead he consulted another physician who excised the lesion. A few months after the operation the gumma began to reappear and when presented it was fully its original size and more deforming on account of the cicatrix resulting from the operation.

No definite luetic history was obtainable from the patient. He stated that seven years ago, while working as a plasterer, a pot of hot plaster fell on him covering him with much of it, particularly his head and shoulders. As a result of this mishap he had a skin inflammation of his face and neck for several months, but finally the skin healed except for a spot over the left zygoma; it was from this area that the gumma developed.

#### **Bromide Eruption.** Presented by DR. BURNS.

The eruption occurred in a boy thirteen years of age afflicted with epilepsy, and who had been taking fifteen grains of potassium bromide three times a day almost continuously for three months. At first the cutaneous action of the drug was confined to the production of a coarse pustular acneiform outbreak over the face and back. For the past month, however, there had been lesions on both legs which had considerably

incapacitated the patient, occurring as penny to silver-dollar-sized, exuberant, granulating areas, with papilliform surfaces. On several of these lesions the epidermis was raised by serous exudate, forming flaccid bullæ.

**Hereditary Syphilis.** Presented by DR. C. J. WHITE.

A young woman, twenty-four years of age, showed numerous symptoms of inherited syphilis, some of which dated back to childhood. Her family history and her condition in infancy were unknown. Both tibiæ were markedly bowed anteriorly. Along the inner surface of the left thigh were multiple ulcerations, quite regularly rounded, deep and one-quarter to one-half an inch in diameter. Both corniæ showed evidence of previous interstitial keratitis. In the pharynx there was well-marked cicatricial contraction of the left side of the soft palate.

**Case for Diagnosis (Syphilitic Alopecia ?).** Presented by DR. BURNS.

K. S., eighteen years of age. The hair began to fall a year ago during convalescence from a severe attack of pleurisy. The loss of hair at that time was considerable, and evenly generalized over the scalp. The hair returned almost completely, but two months ago began to fall again, worse than ever, this time also accompanied by some loss of the eyebrows and eyelashes. The hair generally was much thinned, particularly at the temples and vertex, where the scalp was noticeably bald. There was also an irregular loss of the eyelashes and eyebrows. The scalp was quite devoid of lesions. The skin in general was free from eruption. Venereal disease was denied.

The opinion prevailed that the loss of hair in this case closely resembled syphilitic alopecia, though in the absence of other symptoms of the disease, it seemed impossible to make a definite diagnosis.

**Hypertrophic Primary Lesion of the Lip.** Presented by DR. BURNS.

Stella W., aged twenty-three. Six weeks ago a small abrasion appeared on the middle portion of the lower lip, which persisted despite the application of various remedies. After lasting three weeks the original lesion began to heal, but coincidentally began to spread laterally across the right half of the lip. The lesion was an irregularly circumscribed, hypertrophic ulcer, three inches in diameter, extending from the median line of the lower lip to beyond the right angle of the mouth, firmly indurated and practically painless. From the ulcerated surface the spirochæta pallida was found. Except for a large submaxillary gland on the right side no other symptoms of syphilis had yet developed. Immediate antisiphilitic treatment was advised.

F. S. BURNS, M.D.,  
Secretary.

REVIEW  
OF  
DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MacKEE, M.D.

THE MORE RECENT IDEAS ON THE TREATMENT OF SYPHILIS,  
WITH PARTICULAR REFERENCE TO EHRLICH'S  
"606."

By FAXTON E. GARDNER, M.D., New York.

*(Continued from Volume xxviii, page 700).*

The *absorption* of "606" differs according to the mode of injection. In intravenous administration, an alkaline *solution* is used and absorption is direct.

In subcutaneous or intramuscular injections, either an alkaline *solution* of the salt or a neutral *suspension* of the base, or an oily *emulsion* of the undissolved salt is used. Is the absorption identical in all cases? The question has more than an academic interest, because alkaline solutions are painful, while the other modes are relatively painless. Neisser thinks there is a difference in the absorption according to the physical and chemical condition of the injection; he prefers the alkaline solution and believes we cannot expect as quick results from the drug administered in an insoluble form.

However, clinical facts do not seem to bear out strictly this objection. It is a fact that after any mode of injection, the absorption of some of the arsenic is very rapid, because it always appears in the urine within a very short time; but it is also certain that most of the arsenic is not absorbed directly, but much in the same way as mercury is after an insoluble injection; that is, the injection causes the formation of a coagulum from which arsenic is taken up progressively by the leucocytes. Proof of this fact is found in the presence of nodules still containing arsenic in the gluteal muscles of patients who had received "606" two to six weeks before and had died of intercurrent affections.

Lévy-Bing and Lafay contend that the arsenical treatment of syphilis, just as the mercurial, exists under the two forms—insoluble and soluble; further, that "606" is the transition between the two, just as are for mercurial injections, oily solutions of biniodide of mercury, which are injected under a soluble form, but absorbed only after the mode of an insoluble injection. This practically would mean that, whatever the nature of the injection, absorption is the same; and it would take the edge off Neisser's criticism, if established beyond doubt. However, whatever the presumptions may be, much is still a matter of speculation. We can-



not now decide with certainty whether the effects of arsenobenzol are the same with all varieties of injections, or whether, on the contrary, the differences noted between the reports of writers are not precisely due to such variations in the technique.

Of the intimate metabolism of "606" within the human body, we know nothing. We do not know whether it goes as arsenobenzol to the spirochætal foci to destroy the parasites, or whether it is first transformed into another body or series of bodies having that parasitocidal property. The only thing we can do after an injection of "606" to follow the drug is to watch the *elimination of arsenic* from the body. This is a very important point to which Ehrlich has devoted special attention, and on which his "questionnaire" was always very pointed. It has been studied particularly by Fischer and Hoppe, and later, by Greven. The elimination takes place mostly through the kidneys and accessorially through the intestines. It begins very quickly after the injection. Greven always found arsenic in urine voided half an hour or an hour after the injection, care being always taken to test the urine before, so that there could be no possibility of error due to a previous arsenical treatment. The elimination is rapid during the first five days, then only faint traces may be found sometimes till the 18th or 19th day, but as a rule the elimination is complete on the 12th day. If a course of mercurial inunction be carried on, the elimination of arsenic is slower; it lasts two or three days more. On the contrary, the administration of potassium iodide shortens it.

This applies only to intramuscular or subcutaneous injections. Greven thinks that the elimination is a little quicker after a subcutaneous injection than after an intramuscular. This runs against Taege's opinion, who considers the subcutaneous route as too slow; and also against what mercurial injections have taught us respecting the relative rapidity of absorption from the connective and muscular tissues.

After an intravenous injection, the elimination is always shorter than with the other modes, and is complete in two to three days. In faeces, arsenic is found during a period of two to six days.

Fischer and Hoppe have confirmed that in tabetics and paretics the elimination begins much later and stretches over a longer period than in ordinary cases. In some cases, they still found some arsenic in the urine after six weeks. On the contrary, in epileptics having sound kidneys, all the arsenic was always eliminated within five days. This is in line with what we know about the susceptibility to mercury and iodide of patients having grave parasyphilitic lesions of the central nervous system.

When "606" is injected into a syphilitic patient, it causes an immediate reaction; following this closely, comes the death of the spirochætæ, and an improvement in the clinical manifestations. Contemporaneous with these two actions some untoward effects may be observed. The first and the third class of phenomena are, so to speak, the liabilities of the method; the second, its assets.

The immediate reaction, after an intramuscular or subcutaneous injection, consists of *pain, infiltration and induration, fever, and leucocytosis*. The two latter alone are seen after intravenous injections.

The pain was exceedingly severe with the earlier techniques, so severe that patients were unable to walk, had to lie in bed for several days and narcotics had to be resorted to. There was an immediate pain lasting from 12 to 36 hours, then a free interval of 24 or 48 hours, then a late pain, not as acute as the first, and disappearing after four or five days. The early pain is due to the imperfect neutralization of the injected fluid; the late pain is related to the resorption of the coagulum formed by the arsenical compound on the proteids of the muscle; sometimes to a necrosis of the latter. It has already been mentioned that improvements in the technique have minimized the pain and it is not too much to hope that the day is coming when an injection of "606" will not be any more painful than one of mercury.

The infiltration and induration appear after two or three days. These were often very marked with the earlier techniques, in which the volume of the injection reached 25 to 30 cc.; they are much less with the volumes presently injected, namely, 4 to 8 cc. Even with such a small injection, Favento advises to inject in two different places. In this way he obtains less distention of the skin, less induration, and less tendency to suppuration(?). The infiltration and induration are due to the action of arsenic on the tissues, and are closely connected with the late pain. The suppuration that has sometimes taken place is readily explained by the difficulty of maintaining a rigid asepsis during the preparation of the injection.

The thermic ascensions run a course similar to that of the pain. There is an immediate rise, not very marked, followed by a fall and an apyretic interval of 24 or 48 hours; then a "late" rise, more marked than the first, and which subsides in two or three days. The early rise is accompanied by a high leucocytosis (up to 38,000). The later rise is very likely due to the resorption "en masse" of endotoxins liberated from dead spirochætæ: as confirmatory evidence, it is noteworthy that, after an intravenous injection, the "late" thermic ascension is the only one observed and that it appears very quickly (sometimes after only two hours), owing to the extraordinary rapid destruction of the spirochætæ.

Exceptionally, a fall of temperature, instead of a rise, has been noted. As extremes, Taege has seen 41° C. (105.8° F.) and 36° C. (93° F.), both in women, after an injection of 0.3 gm. in alkaline solution. This fall to 93° F. was the only case of hypothermia in a series of 85 cases.

"The effect of an injection of '606' is difficult to describe in words," says Iversen; "one must see and feel it to form an exact impression." It is clear that the rapidity with which varied lesions disappear depends on the anatomical nature of said lesions.

The most diversified types of hard chancres lose their specific characters in a few days; healing is obtained in from 2 to 28 days, according to Herxheimer, but the induration persists for a long time (Welander). Gross has noted a particularly slow response in chancres of the vaginal part of the cervix uteri.

Among the secondaries, the roseola disappears in a few days, sometimes within 24 hours; superficial erosions, pharyngitis and mucous patches are equally quickly cured. The primary glands shrink and so do those effected by the general adenopathy; while, before treatment, numerous spirochætæ were found in the aspirated fluid from those glands, none exist therein after four days; however, Brandenburg affirms that the primary adenitis never disappears completely. Papular and pustular dry syphilides require 10 or 14 days to heal completely. Moist papules dry up in a few days but take somewhat longer to heal, and often leave a pigmentation of the skin. On the other hand, Wechselmann has obtained with "606" the fading of pigmented syphilides of the neck, so little influenced by mercurial treatment.

Before vanishing, all syphilitic rashes may show, under the influence of "606," Herxheimer's reaction; that is, a temporary increase in the size, color, and relief of the eruptive elements. This reaction is due to the liberation of endotoxin from the spirochætæ; it has been attributed to an insufficient dose; in fact, it does not occur with high doses (Wechselmann).

The general symptoms of the secondary period, pain, headaches, neuralgia, insomnia, etc., are also very quickly influenced and patients take on weight rapidly.

On tertiary lesions, "606" shows at its best; because secondary symptoms are almost invariably rapidly cured by mercury, while tertiary lesions are often obstinate against mercury, even when reinforced by iodides. Even those lesions that offer the greatest resistance to mercury, seem to be the quickest to heal. Palmar syphilides (Taëge) and tertiary glossitis, those stumbling-blocks of mercury, do not resist "606." Gummata disappear in three or four weeks, even when, at the beginning of the treatment, sloughing and ulceration were threatened; old ulcers, uninfluenced otherwise, heal rapidly. Thus Wechselmann saw a large ulceration of the rectum disappear in four weeks. Periostitis and syphilitic pseudo-paralysis, are wonderfully improved (Favento), gummata of the palate and of the nose, with impending perforation, recede without further damage. Chronic jaundice disappeared in one of Wechselmann's cases. A large gumma of the liver melted surprisingly quickly in a case of Kakels'. In gummata of the nervous system, favorable results have been noted in several cases. Neisser, Wechselmann, Wibo, and Marie have cured syphilitic palsies and cerebral gummata with "606." Taëge and Bayet have noted under its influence the regression of the Argyll-Robertson sign in early cases of tabes. Wechselmann saw, also, an im-

provement in the painful symptoms of tabes: shooting-pains, headache, neuralgia. In one case (Neisser) an incontinence of urine, dating back eight years, stopped, and the patient who had not felt a sexual desire or had an erection for the past three years, had, in less than a week, erections and nocturnal emissions. But maybe we have to deal here with a case of auto-suggestion, such as is not infrequent in tabes when a new medication is resorted to. In a general way, most authors agree that tabes and paresis, despite Alt's and Neisser's opinions, are but little influenced. Exceptions in nervous diseases are more numerous than in lesions of other organs, and the method does not seem altogether devoid of danger. We shall have to dwell on this point later.

In hereditary syphilis, results are not uniform. Some good results have been obtained (Fränkel and Grouven, Favento, and others) but some untoward results have been seen also, and maybe are more numerous than the favorable ones. Indeed, Emery, a warm admirer of "606," avers that as a whole, results are not particularly satisfactory when "606" is directly injected into the child. Accidents are common, even with small doses. The outcome is better when "606" is injected into the syphilitic mother of a syphilitic nursing. Taege, Scholtz and Duhot have each reported a case in which an almost moribund infant improved wonderfully after an injection of "606" was given to the mother. It was at first thought that some of the drug had passed through the milk, but chemical analysis showed that such was not the case; and the beneficial influence was attributed to the killing of spirochætæ in the body of the mother with liberation of toxins and subsequent formation of antitoxins which reached the baby through the milk.

The poor—sometimes fatal—results observed after directly injecting the infants may be partly blamed on the wretched physical condition of most of these little patients, and especially on the really prodigious number of spirochætæ in all the internal organs. The sudden destruction of so many parasites frees a very large amount of endotoxin which poisons the child. The failures are not due to the lack of action of "606" on the spirochætæ of hereditary syphilis; on the contrary, Herxheimer and Reinke record a case which leaves no doubt on this point. Two babies, each two months old, afflicted with congenital syphilis received respectively 0.025 gm. and 0.04 gm. of "606." Both died within four days after the injection. Microscopical examination of the organs (Levaditi's method) failed to detect any spirochætæ, except in the lungs, and even those in the lungs showed a very marked degeneration.

It seems, therefore, that the powerful action of "606" is too rapid and too "brutal," for weak syphilitic infants. It seems that the similar, but milder, action of mercury, is better for them, at least in most cases. Nevertheless, in a case of Fränkel and Grouven, 0.05 gm. of "606" brought about an improvement which calomel had failed to induce. So there is need of further cautious investigations on the point; maybe after



all, it is only a question of dosage. In five cases, Wechselmann has obtained better results by injecting twice at an eight to twelve days' interval, 0.015 gm. or 0.02 gm., instead of injecting at one time 0.03 gm. or 0.04 gm.

In pregnant women, probably for the same reasons as in congenital syphilis, great care must be exercised, on account of the poisonous influence "606" may have on the fœtus. In a seven months' pregnant woman, Glück noted very active fœtal movements just before the time of injection; the next day, there were no more of these movements and twelve days later no heart beat was perceptible any longer. In an eight months' pregnant woman, Herxheimer and Schönnfeld observed a very marked slowing of the active movements on the day following the injection. On the other hand, Fränkel and Grouven treated three cases without any accident.

The clinical results receive a strong direct confirmation in the disappearance of the spirochæta from the lesions, as shown by the examination with the dark field transilluminator. The parasites are not to be found generally after 24 and 48 hours. Once, Bertarelli saw spirochæta up to the 62nd hour, but, long before that time, they were unmistakably in a dying condition. Cases like that of Fränkel and Grouven's, where spirochæta were found in papular syphilides of the face, two months after the injection, seem exceptional. A few hours after the injection, the parasites may be seen moving around less regularly, and more or less deformed; finally, motion stops completely and bacteriolysis occurs. Bertarelli claims that "606" has no such influence on the common spirochæta of the mouth or on the spirochæta refringens, and concludes that it has an elective action on the pallida. This action, however, is not strictly limited, since Iversen has demonstrated conclusively the extraordinarily quick effect of the drug on the spirilla of recurrent fever, which latter disease was cured in a few hours by a single injection.\*

Another confirmation of the potency of "606" may be sought in its influence on the Wassermann reaction. However, results are far from being identical, or even approximately concordant, in all statistics. The reaction does not always change from positive to negative, and the time of such a change, when it takes place, varies within very wide limits. Pick, in thirty cases, has seen no change at all; Neisser and Kutnisky saw a positive reaction become negative in 44% of the cases; Schreiber and Hoppe in 55%; Huggenberg and Geronne in 60%; Micheli and Quarelli in 95%; Ehrlich in 90%; Glück in only 5 cases out of 20. Loeb

\*Besides syphilis and recurrent fever, the following diseases have been treated with "606":

Successfully: Frambæsia (Nichols). Experimental sleeping sickness (Yakimoff). Verrucæ planæ (Loeb). Lichen Simplex (Loeb, Schwabe).

Unsuccessfully: Psoriasis (Taege). Pernicious anæmia (Favento). Malaria (Favento). Lepra (Bertarelli).

claims that the Wassermann reaction is little influenced. If the more sensitive techniques, such as Stern's, are employed, the percentage of cases changing from positive to negative become still smaller. In 75 cases, Grouven found only 7 that changed, and 8 in which the positive reaction weakened. Bertarelli saw 2 cases out of 14 change.

Similar discrepancies are brought to light when the date of the change is considered. Favento says he has seen the change in the first week; Spatz within 10 to 12 days; Neisser and Iversen from the 20th to the 30th; Glück, from the 25th to the 40th; Bertarelli after the 40th (46th and 62nd); Micheli and Quarelli, between the 40th and the 50th; Lange, who has studied 268 cases, gives the end of the 4th week as the most usual date.

Out of his 268 cases

153 + became — within 4 to 5 weeks;  
 13 — remained —;  
 5 — became +;  
 97 + remained +.

The cases that were negative before the injection and became positive after are either very early cases in which the Wassermann reaction had not time to develop before the injection; or cases in which the freeing of endotoxin by "506" induced a new formation of antibodies in the blood. After becoming positive in such cases, the reaction becomes slowly negative.

The experience of other writers is, in the main, confirmative of that of Lange. In some cases, there are decided changes. In others, perhaps as numerous, there are doubtful changes or no change at all. There may be also here a question of dose. It seems as if, since higher doses are used, changes from positive to negative are more frequent and appear earlier (Favento).

If we take as a gauge of the power of "606" to cure syphilis, the action on the Wassermann reaction—and truly this is the best criterion we have now, though it is not, by any means, a *perfect* criterion, as a negative Wassermann does not mean complete immunization, and may even exist in cases of undoubtedly syphilitic lesions—we see that the splendid clinical cures are not always backed by a real complete cure. The same happens very often with mercury. Never has the disappearance of symptoms been counted in syphilis as more than a symptomatic cure. We cannot take as granted with "606" what we are unwilling to take as granted with mercury, unless we have conclusive proof. However, as bearing on the possibility of a perfect cure, an experiment of Neisser's deserves attention. He inoculated a monkey with syphilis. When the chancre developed, he injected some "606." A month later, a second inoculation with syphilitic virus was again successful. This, if



confirmed, would prove the possibility of a radical cure with one single injection.

On the other hand, it cannot be denied that there are *recurrences* after the use of "606," and that there are cases not *influenced* by the drug.

Recurrences are already comparatively numerous and nothing indicates that there will not be more in the future; four patients of Bering's, treated at the time of the chancre, developed secondaries just the same. So did four patients of Wechsellmann's; a patient of Wolff's, injected at the time of the roseola, had a recurrent roseola four weeks after. Nichols and Fordyce saw 3 recurrences out of 14 cases; Favento 3 out of 156 cases; Herxheimer and Bering have seen rapid recurrences of tertiary lesions; Bertarelli had one recurrence after 35 days, out of 14 cases; Schreiber and Hoppe 10 out of 150; Huggenberg and Geronne 5 out of 55; Glück 2 out of 105; Neisser several times; Fränkel and Grouven go as far as to admit, contrarily to Ehrlich's teaching, that one injection is *never* enough.

Cases not influenced by "606" are not rare either. Fränkel and Grouven quote a case of papular syphilide of the face unchanged after two months despite three injections. Taege reports a case of the same lesion also not benefited. Fränkel and Grouven relate, also, a case of tubercular syphilide which required three injections and two months' time. Jadassohn failed in one case of secondary syphilis; Linser twice; Bering 8 times out of 64 cases. Taege saw very little action on a gumma of the liver. Jacquet reports three cases of tertiary lesions not improved. Ritter and Lange each one case. Meidner, in patients having degeneration of the nervous system, saw no improvement. It must be stated, however, that if "606" has no influence on parasyphilis or syphilitic dystrophies, mercury and other forms of treatment have none either.

We have now to consider the *accidents* imputable to the use of "606." Some are light and cannot be made the basis of any serious opposition; others are serious and deserve all critical attention.

For the sake of convenience, we shall classify them according to the organs they affect. On the *skin*, may be seen various forms of exanthems. Taege had 6 urticarial in 84 injected cases; Glück 5 urticarial and one scarlatiniform in 109 cases; Spatz one urticarial; and Schreiber and Hoppe two scarlatiniform. On the *digestive tract*, very little has been noted. Wechsellmann observed once a case in which there was copious vomiting and the vomited material contained arsenic. Neisser has seen vomiting without finding arsenic. Obstipation and meteorism have been reported occasionally.

On the *respiratory tract*, "606" has no untoward action. Hoffmann relates a case of pleuritis with central embolic pneumonia due to a thrombus formed in a vein near the intragluteal injection. This cannot be charged against "606," but ought to be charged against the technique

of the injection. Treupel treated with "606" a physician who had syphilis and pulmonary tuberculosis with bacilli in the sputum; after the injection, all syphilitic symptoms disappeared, the lung trouble improved and there were no more bacilli in the sputum. Whether due to a happy coincidence or not, this case proves that "606" may be used without apprehension in these cases where syphilis is associated with tuberculosis and mercury and iodide are contraindicated. Lesser cured with arsenobenzol a severe case of syphilis of the lungs.

On the *urinary tract*, we have no serious accidents to record. Most authors agree as to the absence of harmful action on the kidney. Behac and Sobotka have noted sometimes an albuminuria without cylindruria. In 3 cases out of 14 they had a temporary retention of urine, which has been seen also by Herxheimer. Ehrlich attributes these to methylalcohol. Some of Pick's patients showed an oliguria during several days. Iversen's fatal case in which symptoms of acute nephritis appeared shortly before death, pertained to an alcoholic and hysterical woman with marked arteriosclerosis, myocarditis and fatty degeneration of the liver, in which the guilt of "606" in the production of nephritis is not evident. On the other hand, there are cases of albuminuria with symptoms of acute nephritis due to a syphilitic process in the kidney that cleared very well after an injection of "606" (Spiethoff, who quotes, also, a case of filariasis cured by arsenobenzol).

On the *circulatory system*, the action is somewhat more marked: this is not surprising, since "606" is a strong vaso-dilator, and the vascular system is one of those affected early and strongly by the syphilitic poison. Ahythmia with tachycardia (Spatz, Hoffmann) and syncopal tendencies were common when acid solutions were used. Hoffmann has even seen a slight dilatation of the heart. Brandle and Klingenstein in three cases had collapses of short duration. This is enough to warn us against the use of "606" in patients having symptoms of cardiovascular disease.

We have kept for the end the consideration of the action of arsenobenzol on the *eye*, because this is one of the really capital points. The close relationship between "606" and the atoxyl family authorized grave theoretical fears. It seems as if these were unfounded. Experiments on animals have shown that "606," unlike atoxyl and arsacetin, does not attack the optic nerve. Clinically, much stress has been laid by opponents of "606" on two cases of blindness that were supposed to be reported by Isaac. Isaac simply says: "It is claimed that two cases of blindness have been observed in the Berlin Charity Hospital," without any comment. Ehrlich states very emphatically that *no* case of blindness has been brought to his knowledge, though his questioning was particularly explicit on the point. Two patients of Spiethoff's developed after an injection, a very temporary amaurosis: One was a tabetic who received 0.6 gm.; his blindness lasted only a few minutes; the second one received

0.45 gm., and showed a ptosis of the right upper eyelid, and eight weeks after, a total loss of vision on the same side, lasting ten minutes. The examination of the fundus some time after revealed nothing abnormal. In both these cases, the injected fluid contained methylalcohol, which is, maybe, the ingredient to blame. After an injection, several patients complained of having scintillating scotoma before the eyes.

Despite the innocuity of "606," Wechselmann injected only those patients whose eye fundi were found normal on ophthalmoscopic examination. In one case the latter test was omitted. The patient was later found to have had optic neuritis for several months; he had experienced no ill effects from the injection; on the contrary, a month later, his neuritis was cured. Ehrlich says "606" is useful in optic neuritis; in optic atrophy, it is not harmful, even if it cannot help.

Grösz treated with good success with "603," four cases of specific iritis, one scleritis, six cases of parenchymatous keratitis, two cases of chorio-retinitis and a chancre of the conjunctiva. Emery treated successfully a case of double irido-choroiditis, and saw no inconvenience from the drug in a tabetic presenting a neuro-retinitis on one side, and a total blindness on the other. Taege, Ritter and others have happily cured cases of specific iritis with "606." So it seems permissible to affirm that arsenobenzol has no harmful effect on the organs of vision, and is even as much indicated in specific lesions of those organs as in those of any other part of the body.

Now, last, but not least, comes the consideration of a few cases of *death* (14 in all) charged against the Ehrlich-Hata compound. These 14 cases do not include the cases of death of syphilitic infants treated with "606" and which are, judging from the tone of the writers, fairly common. In only a few of those 14 cases are sufficient details given. We have already referred to Iversen's case in which definite judgment is difficult to pass. Fränkel and Grouven's case is that of a man twenty-five years old, suffering from a serious syphilitic degeneration of the nervous system, who received intravenously 0.40 gm. of "606," diluted in only 15 cc. of salt solution. Whether the death is due to shock, as Ehrlich claims, or to the faulty technique, as Fränkel and Grouven are willing to admit, is not very easy to decide. Spiethoff relates the case of a very anæmic and cachectic woman, weighing only 66 pounds, who had a malignant tertiary syphilis of the pharynx and who died almost suddenly after an injection of 0.50 gm., without any premonitory symptoms. The autopsy showed a marked stricture of the pharynx, healed gummata of the liver and an hypoplasia of the heart and the liver, and a considerable amount of inflammatory œdematous tissue pressing on the cervical segment of the cord and anterior roots. Probably pressure on the phrenic nerve was the cause of death. There were no traces of arsenical poisoning. Ehrlich blames the shock in this case, and also in another of Spiethoff's cases, in which death in a very anæmic patient occurred after a week, in which

there had been a temporary improvement. Blaschko's fatal case concerns an old and advanced case of tabes with bulbar accidents; Ehlers' case, a man who had paralysis dating back four years. Glück (of Serajevo) saw a case of death by rupture of an aneurysmal sac, and Jacquet a death through hæmatamesis in a patient having an ulcer of the stomach and who had never vomited blood before. Orth placed before the Königsberg meeting the anatomical specimens of two patients from Kraus' clinic who died twelve and fifteen days after the injection. In both cases there were huge foci of necrosis in the gluteal muscles. One of these patients was a cachectic tabetic, and the other a cancerous cachectic. A case reported was in a patient with a grave syphilitic hemiplegia.

If we analyze these fatal cases, we see that death has been seen in three groups of patients:

1. Patients having grave degenerations of the nervous system.
2. Patients having hæmorrhagic lesions.
3. Anæmic and cachectic patients.

As regards this last group, it would be unfair to apply to all cases the rule: *Post hoc, ergo propter hoc*. Many of these patients would have died almost as rapidly, if not just as rapidly, without "606." The method was tried as a last resort, and it failed.

As regards patients having lesions which bleed badly, "606" seems to be responsible. It is a strong vaso-dilator and it must not be used in such cases.

As regards death in patients showing alterations of the nervous system, Ehrlich blames it on shock, and on infiltration around nerves essential to life. The latter is due to the freeing of endotoxins and the subsequent reaction, and we may add that shock, to a certain extent, seems due to the same cause. It seems very admissible that the massive freeing of endotoxin from dead spirochætæ is the greatest danger of "606," much more than arsenical poisoning, which has never been proved directly. This freeing is evidenced by Herxheimer's reaction, by the death of syphilitic new-borns treated directly with "606," by the recurrence of iritis, as in a case of Taege's, under the influence of an injection, by the changing of a negative Wassermann to a positive under the same influence, and by the perineural œdema in syphilis of the nervous system. It seems that strong patients react well against the poisonous influence of the endotoxin suddenly liberated in large quantities, but the weakened organisms of cachectics cannot cope with it. As this is absolutely inseparable from the potency of the drug, it deserves serious attention, as it limits its use in many cases particularly where its action would be *too* powerful.

Despite the great number of cases treated and the bulky literature accumulated during the past six months, it is yet too early to write a chapter on indications for arsenobenzol, except tentatively and subject to thorough revision. In work of this kind, a personal equation is very



likely to creep in and to warp the soundness of judgment, whether by undue enthusiasm or unjust prejudice, and the neutralizing influence of time is much needed.

As "606" has certainly a very remarkable power, there will probably be a strong temptation, as soon as the drug will be placed within the reach of all, to treat with it all cases of syphilis almost indiscriminately. It would, therefore, not seem superfluous to quote here Grassmann's words: "Ere we are on safe ground with '606,' we shall have still many things to learn, and some of them certainly disagreeable." We cannot say that we know much about the action of arsenobenzol on the organism. The intimate metabolism is wholly unknown. Jaquet remarks, and the point is well taken, that the absence of immediate untoward symptoms referable to a given organ is no token of the harmlessness of the drug as to that organ. Whether the reactions caused by "606" in syphilitic organs are completely harmless or not, time only will tell; and there is no unfair prejudice in the fear of some physicians that they will not prove altogether so.

Again, because "606" has come to light, we must not believe that from to-day dates the successful treatment of syphilis. For decades, nay, for centuries, we have had remedies that have given much satisfaction. We must compute the assets and the liabilities of each method and their respective efficiency and dangers. We cannot make a fair comparison now, because we know much about mercury and much less about arsenobenzol. And let us not forget that mercury, handled in a certain way, has proved its abortive value in some cases; that other arsenical compounds have already been tested and are spoken of highly by competent syphilologists. Some writers even go as far as to say that only in a small proportion of cases, or in none at all, have they obtained from "606" results which would not have been given by mercury and iodide (Brocq, Gottheil). All this to impress this idea on us: that in arsenical treatment a very promising avenue of syphilotherapy has been opened, but that it would be premature, to say the least, to believe that it has been thoroughly explored; caution is still imperative.

For the present, arsenobenzol may be used, with the consent of the patient, in cases of primary or secondary syphilis in strong young subjects without any organic lesions; also, in tertiary cases (with the exception of some nervous cases, as will be stated below), particularly to those which have proved hitherto rebellious to mercury and iodide. Parasyphilitic affections do not derive any benefit from "606"; so they give no indication for its use.

There are some definite contraindications—syphilis of the central nervous system is one of the most important. We have seen that deaths have been observed in that class of cases more than in any other. A bulbar lesion is a formal contraindication, owing to the possibility of a reaction resulting in compression of a vital structure. Grave degenera-



tions, advanced tabes, or paresis, softening and hæmorrhage of the brain are also contraindications. A gumma located in a point where the œdema of neighboring tissues is not to be feared, is not a contraindication, and even seems to be a strong indication.

Cachexia and anæmia may be considered as contraindications, "606" being too powerful, and creating too great a risk of shock; but it must be confessed that in a few such cases, an injection was a life saver.

Diseases of the circulatory system contraindicate the use of arsenobenzol, and particularly generalized arteriosclerosis with its allied visceral degenerations. Multiple arteritis, aneurysm, hæmorrhagic lesions (such as digestive ulcers) forbid also its use. Heart disease is sometimes a contraindication, sometimes not. Grassmann, enlarging theoretically on the point, recalls the all-important rôle played by syphilis in the genesis of heart disease. Sometimes the latter is due to an actively syphilitic process, so that a blanket interdiction of "606" in heart disease would be too broad in its scope. The early symptoms caused by syphilis on the heart, arhythmia or tachycardia, or both, are not contraindications, far from it. Genuine dilatation is, and so is the bradycardia sometimes observed in late periods. This may be due to a gumma of the myocardium in the vicinity of a vital bundle of fibres, and to start a reaction there would be foolhardy. Specific aortitis, coronary sclerosis, and specific aneurysm of the aorta are not contraindications, according to Grassmann. There may be dissenting opinions on the point. Well-compensated valvular lesions allow of the use of "606"; chronic insufficiency, the most delicate point to decide, dictates much caution. All depends on the degree of existing myocarditis, an exceedingly difficult thing to ascertain. Great care must be exercised in cases of defective heart action due to kyphoscoliosis, pulmonary emphysema, and chronic bronchitis. Better still, "606" is not to be used at all in these cases.

Diseases of the kidney, Bright's disease particularly, is a contraindication; syphilitic nephritis, on the contrary, calls for "606."

Lesions of the eye are not contraindications. Even syphilitic ocular affections are very happily influenced by arsenobenzol.

And, now, in closing, two general questions: Has "606" realized the goal aimed at, namely, the *therapia sterilisans magna* of syphilis? Certainly not. There have been failures, there have been recurrences, and no proof is given of the permanent and complete sterilization in any case.

Will arsenobenzol, on account of its often higher power against syphilitic accidents, relegate mercurial treatment to the medical "junk heap"? Most certainly not. There are cases which mercury cures when "606" fails. There are numerous cases where arsenobenzol is contraindicated and in which mercury is our only recourse. But, aside from those cases, will mercurial treatment have no more place, in those cases seemingly treated successfully with a few doses of "606"? Already certain

authors believe that "606" has a more favorable action when preceded by a course of mercurial treatment (Gennerich). Some others believe that an injection of arsenobenzol is only the beginning of the treatment of a case of syphilis, the powerful blow that breaks the backbone of the disease, but is not the whole treatment. Before the Königsberg Congress, Neisser stated explicitly that an injection of "606" did not authorize us to discard our routine treatment of syphilis; the latter has to be administered, and the patient must submit to frequent medical examinations. Emery, a warm defender of "606," always prescribes the regular routine mercurial treatment after the initial injection.

The chief service rendered by "606" will probably be a considerable shortening of the period of contagious accidents. Regarding its value as to the prophylaxis and eradication of the disease, it is very easy to judge. If a drug can give such a result, it need not be a "never-failing panacea" for all syphilitic ailments to be entitled to a very high place among our therapeutic agents.

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## BOOK REVIEWS

**Traitement des Dermatoses par le Radium** (Conférences faites à l'hôpital St. Louis), par le Dr. MASOTTI, membre de la Société française de dermatologie, de la Société de médecine de Paris, et de l'Association française pour l'avancement des sciences. Préface de M. le Dr. Danlos, médecin de l'hôpital St. Louis, Paris, 1910, Librairie, J. B. Baillière et fils.

This little work of one hundred pages gives in a brief manner the author's experience with radium in the hôpital St. Louis. In the introduction Dr. Masotti states that this is but a brief review of the work done, and that he is preparing a larger volume upon the same subject, in which a more detailed account of his experiences, both as to technique and results, will be given.

Intended as a practical book, the physics and theoretical considerations are ignored. The first chapter opens with the apparatus employed by the author, and contains the general technique of application. The method of utilization does not materially differ from that in general use. The remainder of the work is devoted to the treatment of various dermatoses that are amenable to radium therapy, including the proper technique to be employed in each instance.

In vascular nævi a specific action is claimed for radium. In angiomata the results are superb. The tumors disappear, without any trace of the treatment. In the very superficial vascular nævi of a rose or violaceous color the result is an amelioration. In the deeper forms the effect is satisfactory, but considerable caution must be exercised to prevent the formation of areas of atrophy or pigmentation and telangiectases. The author advises plastic surgical operation in angiomata of the scalp, in preference to radium therapy, in order to prevent an area of baldness.

In pigmented nævi, radium acts as a superior escharotic; but in the author's opinion, the destruction is accomplished with a better esthetic result than by any other method.

The results obtained in keloid depend upon the type and age of the growth. In some keloids, where the growth is soft or vascular, the effect is very pleasing, while in other or firm non-vascular tumors, radium therapy is not so satisfactory.

A larger number of cases of rodent ulcer were treated, and the results were uniformly successful. Senile verruæ and patches of leucoplakia, also, are readily removed by this method. Some of the cases of epithelioma were treated in 1904, and as yet there has been no recurrence.

Radium therapy has not proven satisfactory in lupus vulgaris, for the nodules return within a short time after an apparent cure. In the chronic and fixed form of erythematous lupus a greater degree of success was obtained.

The method has proven efficacious in the treatment of acne, rosacea, and rhinophyma. In the latter condition the enlarged blood vessels are greatly reduced, and the sebaceous glands atrophy and become less active. This treatment is frequently advantageously combined with scarification and with other well-known methods. The author has found radium to be of service in the treatment of telangiectases produced by excessive X-ray dosage.

Finally, radium has been found of service in chronic eczema, especially when associated with pruritus and lichenification, the névrodermite of Brocq, and the névrodermite of Vidæ.

The book closes with a short chapter on the advantages and inconveniences of radium-therapy. The former consists of consistency of results, the enormous penetration of the rays, the facility with which radium may be applied, both in

the physician's office, or at the patient's home, the absence of pain, and the superior esthetic cicatrix. The inconveniences are the high price of radium, and the possibility of producing untoward results.

There are a number of interesting case reports and illustrations to fortify the author's assertions.

It is to be regretted that a greater variety of dermatoses were not treated, and that there is no comparison between the effect of the Roentgen ray and radium in these diseases.

The book is paper covered, well printed on a good grade of paper and is not indexed.

G. M. M.

**Medical Epitome Series:** Diseases of the Skin. By Alfred Schalek, M.D. 1910, Philadelphia, *Lea & Febiger*.

Dr. Schalek has written a very clever little book. Although styled a medical epitome, it might with justice be classed as a quiz compend; and whereas compends are not, from a dermatological point of view, considered the highest form of art, still the book has many excellent points, and is quite an improvement on the usual volume of this variety. For instance, the alphabetical arrangement used by the author is much better in a book of its size, than any attempt at a burdensome classification. It is convenient, and no doubt will be appreciated by the student.

Another good feature consists in the placing of the questions at the end of each section, and not having them interpolated in the text. For this the dermatologist will be truly thankful, and praises are hereby heaped upon the author's head; in this way one can read along and not have the eye disturbed on every page by the aforesaid queries, and the undergraduate student can use the book as a quiz, if he so desires.

Along with the many good points there are a few places where exception can be taken, and it will always be possible to pick flaws, just so long as dermatologists differ in their opinions. For example, there is no local treatment given for pityriasis rosea or erythema nodosum; the subject is dismissed with the statement that local treatment is unnecessary. This seems somewhat queer, as it is known by many practitioners that external measures are very beneficial for these dermatoses, and cooling lotions are gratefully received by cases of erythema nodosum. In fact it seems in some cases, as if the local measures were more beneficial than the systemic.

The author also speaks of lichen ruber and pityriasis rubra pilaris as different maladies, and gives the differential diagnosis between them: although there was a time when this was thought by some men to be correct, at present the general consensus of opinion is that they are one and the same disease.

Acne varioliformis is placed with the different forms of acne, and is not spoken of as a tuberculide; this may, however, be considered by some as still an unsettled problem. It is stated that it is a distinct affection from the ordinary acne.

It would be an injustice to expect the author to go into minute detail in such a small and inadequate space, and taken as a whole, the book is exceptionally good. It is filled with good diagnostic points, and the suggestions as to treatment are excellent and up to date in every way. The chapter on cutaneous syphilis is especially well written. The book is intended for students, and is well worth having. It is surprising how much valuable information can be condensed into such a small volume.

W. B. T.

**La Photothérapie: Ses Avantages dans le Traitement du Lupus Vulgaire.**  
By LEON FRIEDMAN, M.D. 1910. Paris, *Vigot Frères*.

This booklet of 120 pages is devoted to a detailed exposition of the treatment of lupus vulgaris, by means of the Finsen method.

The first part of the book deals with the frequency and gravity of lupus vulgaris, a disease which is, of course, much more commonly met with in Europe than it is in this country. He then describes the Finsen apparatus with its compressors and other accessory parts, the technique of the applications and the various phases of the reaction produced by the light.

The Finsen method undoubtedly produces the best results in the treatment of this most obstinate of skin diseases. In its percentage of cures, its small proportion of relapses, and its cosmetic results, it is by far the most efficient mode of treatment, especially so in the more extensive and disfiguring cases so commonly seen on the continent.

The following statistics are from the Finsen Institute at Copenhagen, and relate to 804 patients, in whom the average duration of the disease was eleven years:

I	Cured .....	412
II	Very nearly cured .....	192
III	Under treatment .....	117
IV	Treatment discontinued .....	83
		<hr/> 804

Of these cases, 695 or 94% were favorably influenced by the treatment.

In Finsen's statistics, he shows that the cases in which only comparatively small areas of skin were diseased, cures were obtained in 73%, whereas in the cases with large diseased areas, there were only 23% cures. Cases which had been previously treated by other than the Finsen method, leaving scars and infiltrations, respond much less readily to the method than untreated cases, and are much more difficult to cure.

The second part of the book describes the various modifications of the Finsen method, together with the apparatus employed, such as the lamps of Lortet and Genoud, Finsen-Reyn, Bang, Kromayer, etc.

The last chapter deals with an account of numerous experiments with injections into the diseased skin, of various chemical substances, with a view of increasing the sensibility of the diseased areas to the light-rays. The results produced by such injections have not yet been decided upon.

In the last 30 pages the author has appended a very thorough bibliography of light-therapy.

F. W.

**Die Roentgentherapie in der Dermatologie.** VON DR. FRANK SCHULZ. Verlag von Julius Springer, Berlin, 1910.

Despite the numerous excellent treatises on the subject of radiotherapy in dermatology, which exist to-day, the author has succeeded in demonstrating in this little book, the fact that there is still plenty of room for improvement in the realm of X-ray therapeutics for diseases of the skin. Furthermore, his book shows that he thoroughly understands the subject, and that a large amount of original investigation and careful observation on his part was necessary to enable him to give the profession the benefit of his labors. The subject of dosage, that most important item in radiotherapeutics, is treated in the most admirable and comprehensive manner, serving to place the subject of Roentgenotherapy on a little firmer foundation than that upon which it rests at the present time.

The subject-matter of this little volume of 140 pages is divided into four sections. The first section is devoted to the description of the various types of apparatus employed by the radiotherapeutist, their mode of action and their uses. The second section deals with the technique of radiotherapy, and here the author describes in great detail the methods of measuring the dosage of X-rays—a chapter rather difficult for anyone not conversant with the subject to readily understand. Here and there, the subject seems a little involved, and many of the paragraphs require careful reading and re-reading before the author's meaning is fully grasped.

In the third section devoted to general therapy, the writer discusses idiosyncrasy, over-susceptibility, reaction on normal and pathological tissues, selective action of the X-ray, the absorptive properties and radiosensibility of normal and pathological tissues, finally ending the section with a table or schema giving the methods of application of the rays to the various forms of dermatoses.

The fourth section deals with the various groups of skin diseases amenable to Roentgen treatments. This section is divided into three groups of dermatoses, the three divisions being dependent and based upon the amount of dosage required to effect a cure or a favorable reaction in the various diseases treated. The first group, composed (among other diseases) of the various forms of eczema and seborrhœa, prurigo, acne, sycosis, ringworm, the lichens, erythemas, psoriasis, and some of the bullous diseases, requires relatively small doses of radiation, and are treated by the following method: A tube registering one degree of hardness (rapidity of rays) equivalent to 7.0 to 7.5 by the estimated Wehnelt kryptoradiometer, is employed, giving one-third of the full dose of rays measured with the Sabouraud-Noiré pastilles. This comprises the first dose of X-rays. The second third of the dose is administered eight days later; the last third of the dose fourteen days after the second. This completes the cycle of the first full dose, and this cycle should not be repeated until twenty-one additional days have elapsed. The three doses are all alike in quality and quantity, *i.e.*, 7.0 to 7.5 Wehnelt, and one-third of the Sabouraud-Noiré full dose.

Should an erythema intervene in spite of this careful method of administration, it behooves us to await the entire disappearance of the inflammation, and an additional three weeks besides, before further X-ray treatment is instituted. If no marked improvement is apparent after such a procedure, the author advises the same method of dosage, with this difference: that the hardness (degree of rapidity of rays) of the tube should be increased so as to register 8.5 to 9 Wehnelt.

The author's second rubric of dermatoses comprises chiefly the tuberculosis group, and the tuberculides. Lepra also is included here. The method of dosage consists in administering two half doses of Sabouraud-Noiré, using a tube of 5 to 7.5 Wehnelt, with a lapse of two weeks between treatments, and three weeks' lapse between each cycle. The author considers the entire group of tuberculous skin diseases especially amenable to radiotherapy, with the exception of the smooth, flat form of lupus vulgaris, in the treatment of which he has not met with success. He emphasizes the well-known fact that erythematous lupus does not react favorably to the X-rays. His results with lepra were also unfavorable, although his experience with this disease is meagre.

The third group comprises those diseases in which the most beneficial effects are obtained by administering three-quarters, four-fifths and full doses, with intervals of 3 to 4 weeks between the applications. The author here calls attention to the fact that these doses are capable of producing epilation, and that in all cases, the normal skin, the thyroid, the testicles and ovaries should be protected. The degree of hardness is 7, to 7.5 Wehnelt, as before.



The group is a large one, and includes, among other diseases, the various forms of trichophytosis, favus, benign and malignant tumors, nævi, leukæmic tumors of the skin, and mycosis fungoides. In contradistinction to Freund, Belot and other authors, he advises against the use of the X-rays in hypertrichosis.

Although a number of diseases mentioned by the author as favorable for radiotherapy can be cured in far less time and with much less risk and trouble by other therapeutic agencies, the book is, on the whole, an exceedingly valuable one, and one which will be thoroughly appreciated by every dermatologist who considers the Roentgen ray a valuable part of his armamentarium.

F. W.

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## AMERICAN DERMATOLOGICAL ASSOCIATION STATISTICS.

*Gentlemen:*

Fourteen reports submitted by seventeen members of the Association representing ten cities have been submitted for the year 1909, as follows: Boston, Drs. J. C. and C. J. White; Chicago, Drs. Hyde and Ormsby and Dr. Pusey; Cincinnati, Dr. Ravogli; Cleveland, Dr. Corlett; Montreal, Dr. Shepherd; New York, Drs. G. H. and Howard Fox, Dr. Jackson and Dr. Pollitzer; Omaha, Dr. Schalek; Philadelphia, Dr. Hartzell; St. Louis, Dr. Grindon and Dr. Hardaway; Washington, Dr. Carmichael. Thirty-nine members of the Association made no report.

The total number of cases reported is 28,175, a somewhat smaller number than the average for the last five years. This reduction, it may be superfluous to say, is not due to a diminution in the number of dermatological cases in America, but simply to the neglect of a larger number of our members to render a report.

Among the rare dermatoses reported we may mention actinomyces, 3 cases; adenoma sebaceum 7, angiokeratoma 2, anthrax 1, Raynaud's disease 3, atrophica pilorum propria 1, atrophoderma symmetricale 3, cheilitis 3, dermatitis papillaris capillitii 9, dermatitis repens 9, epithelioma benignum cysticum 5, glands 1, folliculitis decalvans 4, frambesia (yaws) 1, granuloma coccidioides 1, granuloma fungoides 6, hidradenitis suppurativa 6, hydroa vacciniforme 7, hydrocystoma 2, lepra 4, lichen scrofulosorum 5, lymphangioma circumscriptum 2, neuroma 4, pellagra 2, pemphigus vegetans 2, pityriasis rubra pilaris 4, rhinoscleroma 2, sarcoma 14, syringomyelia 3, urticaria pigmentosa 12, and xeroderma pigmentosum 3.

The common diseases, eczema, acne, syphilis and psoriasis, are reported in approximately the same ratio as in previous years, and it may now be regarded as established that the eczemas constitute about 18% to 20% of our dermatological cases, acne 6% to 7%, syphilis 9% to 10% and psoriasis 2½% to 3%. Scabies which, during the present decade has assumed so large a rôle in our statistics, shows a still further decline this year, falling to 6.81% from last year's 8.80% and its maximum of 9.75% four years ago.

S. POLLITZER,  
*Chairman Committee on Statistics.*



# COMBINED RETURNS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

For the Year 1909. From January 1 to December 31, Inclusive.

	Boston.	Chicago.	Cincinnati.	Cleveland.	Montreal.	New York.	Omaha.	Philadelphia.	St. Louis.	Washington.	Total.	Per Cent.
Acanthosis Nigricans												
Acne Varioliformis	1	10			1	12	1	5			30	0.11
Acne Vulgaris	293	304	87	69	48	593	18	195	119	122	1848	6.56
Acrodynia												
Actinomycosis	2				1						3	0.01
Adenoma Sebaceum					1	6					7	0.02
Adenoma Sudoriparum												
Ainhum												
Albinismus (a) generalis												
(b) localis		3									3	0.01
Alopecia	113	119	18	8		23	2	5	66	59	413	1.46
Alopecia Areata	59	40	11	14	8	36	5	21	13	6	213	0.75
Anæsthesia				1	7						8	0.03
Angio-keratoma								1	1		2	0.01
Angioma	19	7			21	11	1		10	1	70	0.25
Angioma Cavernosum												
Angioma Serpiginosum												
Anidrosis						1					1	0.004
Anthrax	1										1	0.004
Asphyxia Localis												
(Raynaud's disease)	2	1									3	0.01
Atheroma (Wen)	39	11	2		12	1		8	6		79	0.28
Atrophia Maculosa												
et Striata	1	2				2		2			7	0.02
Atrophia Pilorum												
Propia						1					1	0.004
Atrophia Senilis	1	7			1						9	0.03
Atrophia Unguis		1		3	2			6	2		14	0.05
Atrophoderma												
Symmetricale		1				2					3	0.01
Blastomycosis		10	1								11	0.04
Bromidrosis	1	8	1	1		4		3	4	1	23	0.08
Callositas	27	12			3	6	1	7	11	2	69	0.24
Canities	2	3						1		1	7	0.02
Carbunculus	27	8	4		4	1			9	6	59	0.21
Carcinoma	2	15	2	3	5	5	3		1	2	38	0.13
Cellulitis (phleg-												
mona diffusa)		6			6	12			2		26	0.09
Cheilitis		3									3	0.01
Chloasma	5	12	1	1	2	16	1	8	9	7	62	0.22
Chromidrosis												
Cicatrix	47	6			3			5	1		62	0.22
Clavus	21	1		4		14	2	12	2	2	58	0.21
Comedo	18	5	4	3	13	30	2	1	32	33	141	0.50

	Boston.	Chicago.	Cincinnati.	Cleveland.	Montreal.	New York.	Omaha.	Philadelphia.	St. Louis.	Washington.	Total.	Per Cent.
Condyloma												
Acuminatum	6	52	12			1	1				72	0.26
Cornu	2			1		4		1		1	9	0.03
Cystus (Dermoid)		4			2	5			1		12	0.04
Dermatalgia										1	1	0.004
Dermatitis Actinica (sun-burn and radiodermatitis)		11	2	38		7	1	10	3		72	0.26
Dermatitis Calorica	202	6	75	1	1	14		25	13	4	341	1.21
" Exfoliativa		7	1	1	1			1	1		12	0.04
" Factitia		5		8	2	2					17	0.06
" Gangrænosa	7	3	6			1		1			18	0.06
" Herpetiformis	6	9	4	1	1	20		3	11	2	57	0.20
Dermatitis												
Medicamentosa	18	21	2	2	3	21		3	26	3	99	0.35
Dermatitis Papillaris												
Capillitii	3				3		1	1		1	9	0.03
Dermatitis Repens		1		3	1	2					9	0.03
" Traumatica	2	39	9		3	31		20	42		146	0.52
" Venenata	159	70	15	3	7	177	4	223	68	16	742	2.63
Ecthyma		35	1	17	5	17		48	7	1	131	0.46
Eczema	795	692	127	36	194	1459	46	707	409	344	4809	17.07
Eczema												
Schorrhœicum	37	163	2		35	192	22	144	130	36	761	2.70
Elephantiasis		2	1			2			1		6	0.02
Epithelioma	106	170	15	28	15	98	20	35	64	37	588	2.09
Multi-plex, Benign Cystic	2							3			5	0.02
Equinia (glanders)					1						1	0.00
Erysipelas	29	29	5	9		14	1	4	3	2	96	0.34
Erysipeloid	2					2		2			6	0.02
Erythema Induratum												
Scrofulosorum	2	1	1			1		1			6	0.02
" Multifforme	23	28	3	2	6	55	5	26	18	7	173	0.61
" Nodosum	7	3	2		1	5	1	3		2	24	0.08
" Scarlatiniforme		4	1	3		1			1	1	11	0.04
" Toxicum	7	99	6	14		16	2	2	10		156	0.55
Erythrasma			6	4	1						11	0.04
Fibroma	5	5				7	1	3	1		22	0.08
Folliculitis	21	11	7	3		48	1	9	5		105	0.37
Folliculitis Decalvans			1		2			1			4	0.01
Frambœsia (yaws)	1										1	0.004
Furunculus	276	67	10	7	12	117		131	52	14	686	2.43
Granuloma Coccidioides		1									1	0.004
" Fungoides	3		1	2							6	0.02
Herpes Simplex	21	47	10	4	4	32	5	32	19	4	178	0.63
Herpes Zoster	21	51	9	4	5	50	5	53	13	14	225	0.80
Hidradenitis												
Suppurativa		5	1								6	0.02
Hydroa Vacciniforme	1	1		1		3			1		7	0.02
Hydrocystoma			1						1		2	0.01
Hyperæsthesia									2		2	0.01
Hyperidrosis	39	10	1	4		37		18	9	5	123	0.44
Hypertrichosis	33	45	6		1	2	2	10	27	38	164	0.58
Ichthyosis	5	11	4	2	1	1		13	3	2	42	0.15
Ichthyosis Congenita							1				1	0.004

	Boston.	Chicago.	Cincinnati.	Cleveland.	Montreal.	New York.	Omaha.	Philadelphia.	St. Louis.	Washington.	Total.	Per Cent.
Icterus		1			4	1					6	0.02
Impetigo	330	293	2	77	91	343	3	478	38	41	1696	6.02
Impetigo Herpetiformis												
Intertrigo		22	2	7		9			3	3	46	0.16
Keloid	21	12	2	1	4	19	2	3	4	2	70	0.25
Keratodermia	11	8				1					20	0.07
Keratosis Follicularis					2	1			1		4	0.01
Keratosis Palmaris et Plantaris	7		2	1		9	1	3			23	0.08
Keratosis Pilaris	20	1				2		1	1	1	26	0.09
Keratosis Senilis	13	28		7				9	21		78	0.28
Kraurosis		1		10		1					12	0.04
Lentigo	3	4			3	1		2	7	2	22	0.08
Lepothrix												
Lepra		1				3					4	0.01
Leuconychia		2		3							5	0.02
Lichen Planus	14	30	18	11	4	39	6	18	6	7	153	0.54
Lichen Ruber						2					2	0.01
Lichen Scrofulosorum		3					1		1		5	0.02
Lipoma		3			2	1	1				7	0.02
Lupus												
Erythematosus	21	31	7	9	9	43	2	12	10	3	147	0.52
Lymphangiectasis												
Lymphangioma					1	1		1			3	0.01
“Circumscriptum					1			1			2	0.01
Lymphangitis			3	1		13					17	0.06
Melanodermia	2	1		3							6	0.02
Millaria												
(Prickly Heat)	11	22			2	19	2	31	13	4	104	0.37
Milium	5	8	1		1	1	1	3	10	5	35	0.12
Molluscum												
Contagiosum	7	3		1	2	9		80	2		104	0.37
Monilethrix												
Morbilli		7		9				1	5	2	24	0.08
Morbus Addisonii		1			1					1	3	0.01
Morphœa		7		1		3			2		13	0.04
Mycetoma												
Myoma												
Myxœdema												
Nævus Fibrosus	3	8	2		1	2			10		26	0.09
Nævus Linearis						2	1				3	0.01
Nævus Lipomatodes								1			1	0.004
Nævus Papillaris	3										3	0.01
Nævus Pigmentosus	14	34		4	5	11	2	7	10		87	0.31
Nævus Pilosus	5		1	4	1	2			9		22	0.08
Nævus Vascularis	23	30	1	2	13	43	6	6	17	3	144	0.51
Neuroma	2			2							4	0.01
Œdema Circumscriptum Acutum	15	3	1	2		1	1	2	1		26	0.09
Onychauxis	3							3	1		7	0.02
Onychia	5	4	4	4	1		1			2	21	0.07
Pachydermatocele												
(Dermatolysis)				1	1						2	0.01
Papilloma	3	11		8		1		4		2	29	0.10

	Boston.	Chicago.	Cincinnati.	Cleveland.	Montreal.	New York.	Omaha.	Philadelphia	St. Louis.	Washington.	Total.	Per Cent.
Paronychia	65	3	5	4		31		7	7		122	0.43
Pediculosis Capillitii	217	121	7	39	20	173		98	22	1	698	2.48
Pediculosis Corporis	18	99	16	13	18	32		54	7		257	0.91
Pediculosis Pubis	11	26	4	2		12		26	6	7	94	0.33
Pellagra		1		1							2	0.01
Pemphigus		5	1				1		1		8	0.03
Pemphigus Vegetans		1						1			2	0.01
Pernio	9	2	2			11		6	1	2	33	0.12
Piedra												
Pityriasis Rosea	26	24	2	6	2	44		30	11	14	159	0.56
Pityriasis Rubra												
Pityriasis Rubra												
Pilaris		3				1					4	0.01
Pityriasis Simplex				2	1				5		8	0.03
Porokeratosis												
Pompholix	2	39	1	2		16	1	7	6		74	0.26
Prurigo	3		5	21	1	18			1		49	0.17
Pruritus	56	72	11	15	29	66	2	14	43	11	319	1.13
Psoriasis	137	152	40	30	24	210	7	62	38	41	741	2.63
Purpura	12	12	1	1	1	8		8	3	3	49	0.17
Rhinoscleroma				1		1					2	0.01
Rosacea	50	119	20	15	4	113	13	37	21	8	400	1.42
Rubella (Rötheln)		5		1		5		7	9	2	29	0.10
Sarcoma		3	1	2	1	1	2		3	1	14	0.05
Scabies	289	184	82	204	88	492	6	427	94	52	1918	6.81
Scarlatina		5		8	5	4	1	3		1	27	0.09
Sclerema Neonatorum												
Scleroderma	4	1		2		7			4		18	0.06
Serofuloderma	23	12				4	1	5			45	0.16
Seborrhœa	83	35	24	37	21	82	5	66	36	39	428	1.52
Staphylococciæ	4	40	1			5	3	5	51	2	111	0.39
Sudamen								1	6		7	0.02
Sycosis Lupoides		1		5							6	0.02
Sycosis Vulgaris	34	33	2		6	43	4	20	5	5	152	0.54
Syphiloderma	275	905	372	25	31	368	16	148	181	218	2539	9.01
Syringo-myelia	3										3	0.01
Telangiectasis		5	2			2	5	2	15	7	38	0.13
Tinea Favosa	8	16		11	3	18	1	12			69	0.24
Tinea Tricophytina	80	2				8					90	0.32
a. Circinata (corporis)		42	49	9	7	59	2	92	8	2	270	0.96
b. Tonsurans (capitis)		26	1	12	20	124	1	97	18	9	308	1.09
c. Sycosis (barbæ)		6	5	7	2	24	3	15		4	66	0.23
Tinea Versicolor	27	53	2	10	7	55		23	17	4	198	0.70
Trichorrexia		1		6							7	0.02
Tuberculosis				2		1			1		4	0.01
Lupus Vulgaris	17	13	9		2	12	1	4	3	3	64	0.23
Tuberculosis												
Verrucosa	1	4	1	2	1	14		3		1	27	0.09
Ulcus	93	117	100	4	5	52	1	4	45	6	427	1.51
Ulcus Molle	66	237	55	33		11			3	9	414	1.47
Uridrosis												
Urticaria	114	126	9	7	46	437	1	66	22	21	849	3.01
Urticaria Pigmentosa		8				1		3			12	0.04
Vaccinia		3	1					1	7		12	0.04

	Boston.	Chicago.	Cincinnati.	Cleveland.	Montreal,	New York.	Omaha.	Philadelphia.	St. Louis.	Washington.	Total.	Per Cent.
Varicella	1	18	2	2	8	45		32	7	4	119	0.42
Variola		14				1				2	17	0.06
Verruca	51	72	9	19	15	81	2	49	68	3	369	1.31
Verruga Peruviana												
Vitiligo	13	16	3	7	3	18	2	7	2	4	75	0.27
Xanthoma	2	7	1			5		6	3	5	29	0.10
Xeroderma												
Pigmentosum				2	1						3	0.01
Xerosis	13	11	1			3					28	0.10
Unclassified	1	17	7	4		51	1	4	7		92	0.33
	4871	5599	1378	1046	966	6572	267	3931	2190	1346	28,166	

## BOOKS AND REPRINTS RECEIVED.

*Books marked with an asterisk will be reviewed.*

**Cystoscopy as an Adjuvant in Surgery, with an Atlas of Cystoscopic Views and Concomitant Text.** For Physicians and Students. By Staff Surgeon DR. O. RUMPEL; Lecturer in Surgery at the University of Berlin. English translation by Dr. P. W. Shedd. 22 textual figures and 85 colored illustrations on 36 plates; 131 pages. *Rebman Co.*, New York, 1910.

**\*Manual of Tropical Medicine.** By DR. ALDO CASTELLANI and DR. ALBERT J. CHALMERS. *Baillière, Tindall and Cox*, London, 1910.

**\*Manual de Dermatologia General.** Por el DR. J. PEYRI y ROCAMORA, y con la colaboración de los DRES. C. COMAS y A. PRIÓ. *J. Espasa é Hijos*, Barcelona, 1910.

**Atlas of External Diseases of the Eye.** For Physicians and Students. By DR. RICHARD GREEFF; Professor of Ophthalmology in the University of Berlin and Chief of the Royal Ophthalmic Clinic in the Charité Hospital. English translation by P. W. Shedd. 84 illustrations in color from wax models printed on 54 plates, with explanatory text. Illustrations from models in the Pathoplastic Institute in Berlin. *Rebman Co.*, New York, 1910.

**\*Medical Electricity and Roentgen Rays, with Chapters on Phototherapy and Radium.** By DR. SINCLAIR TOUSEY. *W. B. Saunders Co.*, Philadelphia, 1910.

**\*Practical Points in the Use of the X-Ray and High-Frequency Currents.** By DR. ASPENWELL JUDG. *Rebman Co.*, New York, 1910.

**\*Education in Sexual Physiology and Hygiene: A Physician's Message.** By DR. PHILIP ZENNER. *The Robert Clarke Co.*, Cincinnati, 1910.

**\*Soured Milk and Pure Cultures of Lactic Acid Bacilli in the Treatment of Disease.** By DR. GEORGE HERSCHELL. Second Edition. *Chicago Medical Book Co.*, 1909.



Die chronische Gonorrhoe der männlichen Harnröhre und ihre Komplikationen. Von DR. F. M. OBERLÄNDER und DR. KOLLMANN. ZWEITE vermehrte und verbesserte Auflage. Mit 175 Abbildungen im Text und 7 Tafeln. Georg Thieme, Leipzig, 1910.

\*Le Xeroderma Pigmentosum.. Par le DR. G. ROUVIÈRE. *J. B. Baillière et Fils*, Paris, 1911.

\*Lectures on Cosmetic Surgery. A Manual for Practitioners. By DR. EDMUND SAALFELD. English translation by Dr. J. F. Halls Dally. *Paul B. Hoeber*, New York, 1910.

\*Maladies du Cuir Chevelu: Les Maladies Cryptogamiques: Les Teignes. Par le DR. R. SABOURAUD. *Masson et Cie*, Paris, 1910.

\*Die experimentelle Chemotherapie der Spirillosen (Syphilis, Rückfallfieber, Hühnerspirillöse, Frambösie). Von PAUL EHRLICH und S. HATA. Mit Beiträgen von H. J. Nichols, J. Iversen, Bitter und Dreyer. *Julius Springer*, 1910.

Lichen Planus. DR. CHARLES A. KINCH (Reprint). *N. Y. Med. Jour.*, July 30, 1910.

The Physician, the Surgeon, and the Specialist. DR. G. MORGAN MUREN (Reprint). *Internat. Jour. Surg.*, Nov., 1909.

The Ehrlich-Hata (606) Preparation (Therapia Sterilisans Magna). A Review of Some of the Reports Made by German and French Physicians Upon the Treatment of Syphilis by this Preparation. BETHUNE STEIN (Reprint). *Med. Rev.*, Nov. 5, 1910.

A Case of Pemphigus Vegetans, with Remarks on Treatment. DR. GEORGE PERNET (Reprint). *Brit. Med. Jour.*, Sept. 24, 1910.

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# THE JOURNAL OF CUTANEOUS DISEASES

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## PERIADENITIS MUCOSA NECROTICA RECURRENS.

By RICHARD L. SUTTON, M.D., Kansas City.

THE following case, which was seen in consultation with Dr. Frank J. Hall, a pathologist of this city, and which was later referred to me for treatment, represents an affection which is new to me and also to various other dermatologists with whom I have communicated concerning it.

The patient, A. G. L., was a male, a student, sixteen years of age.

**FAMILY HISTORY.** His father is living and in good health at fifty-three. His mother is of the same age, and enjoys excellent health. There are two other children, a boy and a girl, both living and well. On the father's side the history is negative. The mother's mother (the patient's maternal grandmother) died of tuberculosis of the lungs, and her mother's mother, and also her mother's father's mother, died of this disease.

**PERSONAL HISTORY.** The patient is a native of Missouri, and a resident of Kansas City. Prior to the age of three months he was a well-nourished, healthy boy. At that time abscesses developed in both ears. The pus finally escaped through the aural channels, but the discharge became chronic, and persisted for about twelve months. At various times during childhood the patient suffered from measles, whooping cough, diphtheria, and summer diarrhœa, but, in spite of these numerous ailments, he was fairly well and strong during the intervals. At the age of ten he had a severe attack of articular rheumatism which lasted three months. He has always been a mouth breather, although he was operated on for adenoids when he was twelve years old. He has had interstitial gingivitis for several years. The exact date of the onset of this disease is not known, but it began between the patient's ninth and tenth birthdays. There has been

present no chronic cough, nor any of the usual signs of pulmonary tuberculosis.

**PRESENT ILLNESS.** Since early infancy the patient has suffered from a peculiar, recurring, localized inflammation of the lingual and buccal mucous membranes. About once in every fortnight a slightly elevated, sharply circumscribed, red nodule (occasionally two, or even three, are present at the same time), varying in size from the head of a pin to the top of an ordinary lead pencil, appears on one of the above named surfaces. In the course of three or four days the intense congestion is followed by sloughing, and a solid, mummified-like plug separates, leaving a crateriform depression which extends well down into the corium. The ulcer then bears a considerable resemblance to an inflamed lingual chancre with a depressed centre. While the lesions are in course of development they are smooth, hard, and resistant to the touch, and quite painful, and the associated lymphatic glands are enlarged and tender. There is some elevation of temperature during the course of an attack— $100^{\circ}$  to  $101^{\circ}$  F.—and the pulse averages from ninety-six to one hundred per minute. There is apparently no suppuration, and no pus can be squeezed out when the nodules are incised. No hæmorrhage results when the plug is thrown off. The lesions heal within six or eight days, leaving smooth, pliable, grayish scars, from one-half to one centimetre or more in diameter. These cicatrices bear very little resemblance to the whitened areas seen in leucoplakia. They are irregular in outline and imperceptibly fade into the healthy contiguous tissue. Apparently trauma, such as the slight injuries received when cracking nuts between the teeth or while masticating hard or rough articles of food, plays but little part in the ætiology. The sides and under surface of the tongue are attacked more often than the dorsum. The mucous surfaces of the cheeks and lips are affected with about the same degree of frequency. During the course of an exacerbation the patient is mentally irritable, and somewhat restless, and the tongue becomes covered with a heavy, light-brown coat. The appetite is not particularly impaired, however, and the boy continues his school work as usual. The gingivitis appears to bear no relation to the accompanying disease. The size and severity of the lesions vary somewhat with the seasons of the year. As a rule, they are worse in the Spring and Fall than at other times.

**EXAMINATION.** The patient is a well-built boy, five feet and four inches in height, and weighs one hundred and thirty-eight pounds. He has brown hair and eyes, and a smooth, flexible skin. A careful



general examination fails to reveal any abnormality of the internal organs. The pulse rate is seventy-six per minute, and the blood pressure is 124. mm. Hg. (Riva-Rocci, recumbent, 14 cm. armlet). The hæmoglobin percentage is 75; red cells, 5,000,000, and white cells, 7,200. Three differential counts average as follows: large mononuclears, 8.2%; transitionals, 3%; small mononuclears, 21%; eosinophiles, 4%; polymorphonuclears, 62%; and mast cells, 1.7%.

The Wassermann (Noguchi) test is negative. The application of tuberculin by von Pirquet's method, gives a decided reaction. The injection of 1.5 mg. of Koch's old tuberculin, subcutaneously, causes the temperature to rise from 99° to 101° F., but no perceptible change is observed on the buccal mucosa.

An examination of the sputum for tubercle bacilli is negative. Glandular involvement is to be found only in the left submaxillary region. There are no lesions of any kind to be found on the skin. Some of the teeth are loose, and pus exudes from the sockets when the gums are pressed against the teeth. Two of the lower molars are missing, having been extracted on the supposition that the recurring affection was a trophic one, due to pressure of the roots upon the trunk of a submaxillary nerve. On the under surface of the tongue, to the left of the frænum, is a cup-shaped, circular depression, about 1.5 cm. in width and 6 cm. in depth. The margin is quite sharply cut, and slopes rather abruptly. Immediately surrounding the lesion the mucous membrane is inflamed and congested. The ulcerated surface is partly covered with an adherent, grayish-white membrane. There is no pus, and no hæmorrhage. The plug had been removed twelve hours previously, and there is still considerable induration. The lesion is somewhat painful and tender, but not exceedingly so. Several thin, pale, irregularly outlined scars, left by previous ulcers, are to be seen.

**HISTOLOGICAL EXAMINATION.** Five pieces of tissue, excised from the central portions of one early and four mature lesions, and one recently detached plug were at various times secured for laboratory purposes. The bits of tissue from the early nodule and from one of the larger lesions were fixed and hardened in alcohol, that from one of the mature nodules was fixed in Zenker's solution; the plug was placed in a 4% aqueous solution of formalin, and the remaining pieces were used for animal experimentation. For staining purposes, Unna's polychrome methylene blue, hæmatoxylin-eosin, Gram-Weigert, and carbol-fuchsin-methylene blue were employed, with Wei-

ger'ts for elastic fibres. For comparison, normal buccal mucous membrane (obtained post-mortem) was used.

In the two well-developed lesions which were examined microscopically, the histological features were very similar, and in the earlier nodule corresponding changes were also present, although not so pronounced. These alterations consisted in a superficial necrosis, with decidedly inflammatory manifestations in the underlying structures. The epidermis stained poorly. The connective tissue was densely infiltrated with cells of various types—predominantly plasma cells, fibroblastic cells, mononuclear eosinophiles, and polyblasts.

There was some tendency to nodular accumulation of these elements in and around the blood vessels and lymphatics. The endothelial lining of some of the vessels was swollen and in places proliferating. At one point, in one of the older lesions, was a ball-shaped mass of mononuclear leucocytes which completely filled the lumen of a lymphatic vessel. There was much fibrin in the tissues. The impression given was that the inflammation present must be essentially chronic in character; it appeared hardly possible that such marked changes could take place within the period of a few days. The papillæ were hypertrophied, and in the earlier lesion it was found that the cells of the interpapillary plugs were acanthotic, swollen, irregular in size, and stained poorly and unevenly. No mast cells nor giant cells were found. No caseation was observed. No bacteria could be discovered in the deeper layers, even by the aid of special stains. The elastic tissue was apparently normal. Mucous glands were present in the central portion of each of the excised nodules. The deeper glandular structures appeared to be but slightly, if at all, affected. There was some cellular infiltration in the neighborhood of the basement membrane, but the mucous cells were normal in size and contour, and stained as deeply and as well as those seen in unaffected tissue.

In the recently detached plug (which was removed from a lesion on the lower lip, just posterior to the muco-cutaneous junction) the comparative relationship of the epidermis and the corium was much better preserved than the examination of the earlier nodules would lead one to expect. The layer of superficial necrosis was present here also, and beneath the epidermis the accumulation of mononuclear leucocytes and endothelial cells, both diffusely and in nodules, was present as in the earlier lesions. The œdema, which was so marked a feature in the excised lesions, had disappeared, and the epidermal

cells were collapsed and shrunken. Elongated fibroblastic nuclei and fragmented nuclei were present in the coagulated, necrotic and adjacent tissues. Definite tubercles were not recognized, but numerous giant cells of the tubercle type were scattered both in the neighborhood of the nodules and in the rather dense fibrous and hyaline tissue.

**ANIMAL EXPERIMENTATION.** For inoculation purposes, pieces of tissue, excised from the centres of two fully developed lesions, and extending well down into the corium, were ground up in decinormal salt solution by means of a small mortar and pestle, and the resulting emulsion injected beneath the skins or into the peritoneal cavities of three white rabbits and four adult guinea pigs.

**RABBIT No. 1.** Subcutaneously inoculated, March 28, 1910. Slight local reaction only. Animal killed, April 12, 1910. No glandular enlargement, nor involvement of internal organs. Blood sterile.

**RABBIT No. 2.** Subcutaneously inoculated, March 28, 1910. Animal died thirty hours later. Autopsy showed characteristic signs of "sputum septicæmia." The blood contained the pneumococcus in pure culture.

**RABBIT No. 3.** Subcutaneously inoculated, March 28, 1910. Animal died twenty-six hours later. Pathological changes similar, in every respect, to those observed in rabbit No. 2.

**GUINEA PIG No. 1.** Intraperitoneal inoculation, April 10, 1910. No objective symptoms developed. Animal killed on May 10, 1910. It had gained 60 grams in weight. Pathological findings negative.

**GUINEA PIG No. 2.** Intraperitoneal inoculation, April 10, 1910. No objective symptoms. Animal killed, May 16, 1910. It had gained 10 grams in weight. Pathological findings negative.

**GUINEA PIG No. 3.** Subcutaneously inoculated, in both groins, on April 10, 1910. The inguinal glands on the right side became slightly swollen three days later, and those on the left five days later. The adenitis persisted for only about one week, however. The animal was killed on May 20, 1910. No change in weight. The internal organs were normal. An examination of the inguinal glands proved negative.

**GUINEA PIG No. 4.** Subcutaneously inoculated, April 10, 1910. No objective symptoms. Escaped from cage and was killed and eaten by a dog, eleven days later.

**BACTERIOLOGICAL EXAMINATION.** For a report of the bacteriological findings I am indebted to Dr. Hall. When the case first came under his observation (about two years before I first saw it), a careful search was made for possible offending bacteria. Dr. Hall found Vincent's organisms (both the fusiform bacillus and the spirillum) on the buccal mucosa, and at once concluded that the affection was an unusual manifestation of the disease described by this author. Under the usual line of treatment, however, these bodies were entirely eradicated in the course of a few weeks, and no trace of them has been found since. Inasmuch as the disorder has continued to persist, it

may safely be conceded that these organisms were simply intrusive, and that their presence in the case was without ætiologic significance. In addition to the ordinary streptococcus, and the staphylococcus aureus and albus, an encapsulated diplococcus was isolated, which possessed the morphologic and cultural characteristics of the pneumococcus (*diplococcus lanceolatus*). This organism has been present in considerable numbers ever since the first examination was made.

**TREATMENT.** The direct results secured by treatment have been practically nil. After a great number of antiseptic washes had been tried, Dr. Hall employed an autogenous vaccine, in increasing dosage. The condition of the gums was greatly benefited, but the course of the earlier disease was unaffected. The removal of two lower molar teeth also had no appreciable influence on the disorder.

Shortly after the case came under my care, in March, 1910, the tuberculin tests were made, and it was then advised that the patient follow the routine generally recommended for tuberculous individuals—outdoor sleeping, light exercise, and plentiful amounts of nourishing, easily digested food, with cod liver oil preparations and iron and arsenic internally. For local use, a solution of hydrogen peroxide in glycerin was ordered.

Under this regime, the improvement during the past seven weeks has been very considerable. The patient has gained in weight, and, according to both him and his aunt, a highly intelligent young woman who has nursed and cared for the case for several years, the attacks have been less frequent and far less severe than during any previous Spring and Summer. No large lesions, such as the one shown in figure 4 have developed since April. The gingivitis still continues, although a second series of vaccine injections (*pneumococcus*, stock) was given in May. The course consisted of four doses, at weekly intervals, commencing with 50,000,000 and increasing until a maximum dose of 400,000,000 was reached. The use of this agent undoubtedly improved the condition of the gums.

**CONCLUSIONS.** Although it is not possible to generalize from the data secured in a single case, the following deductions may safely be drawn:

*Periadenitis mucosa necrotica recurrens* is a chronic, recurring, necrotic granulomatous affection of the lingual and buccal mucosa. Pathologically, the disease is characterized by an intense inflammatory process in the periglandular tissues, with ensuing necrosis, and separation of the central part of the affected area.





FIG. 1.  
Periadenitis Mucosa Necrotica Recurrens.  
Mature lesion on tongue (plug was thrown  
off 12 hours later).



FIG. 2.  
Periadenitis Mucosa Necrotica Recurrens.  
Depression left by a recently detached plug.  
The condition of the gums also is shown.

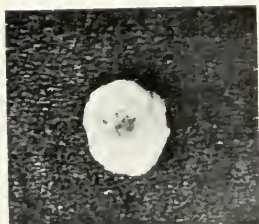


FIG. 3.  
Periadenitis Mucosa Necrotica Recurrens.  
Top plug of lesion shown in Fig. 2 (this  
nodule was the largest one seen).

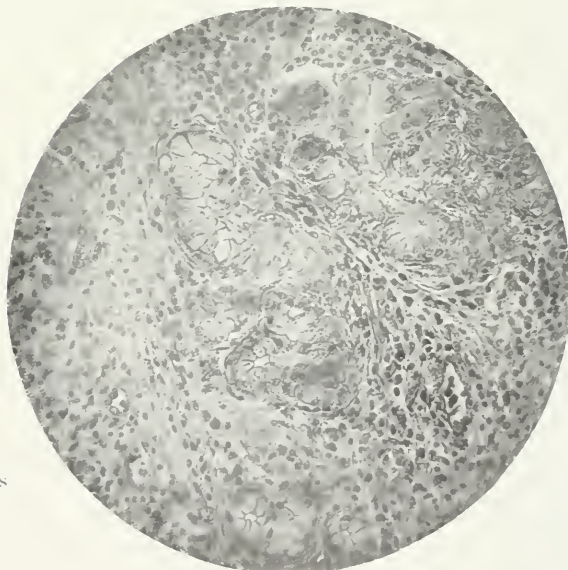


FIG. 4.  
Periadenitis Mucosa Necrotica Recurrens.  
Mucous glands in central portion of an  
excised nodule (Spencer, Obj.  $\frac{1}{4}$ , no  
ocular).





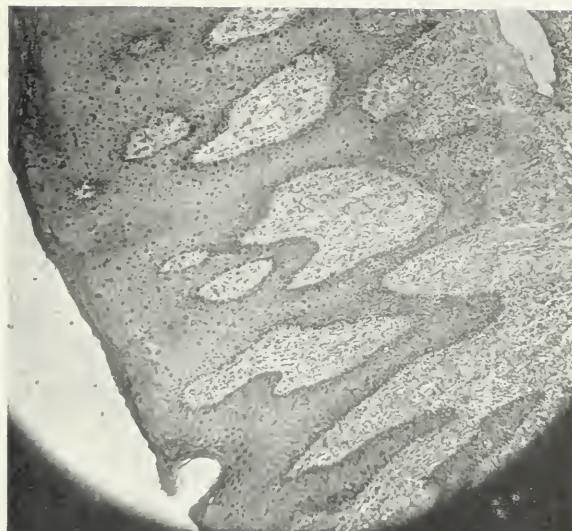


FIG. 6.  
 Peridontitis Mucosa Necrotica Recurrens.  
 Sectional view of plug shown in Fig. 3 (Spencer, Obj.  $\frac{1}{4}$ , no ocular).

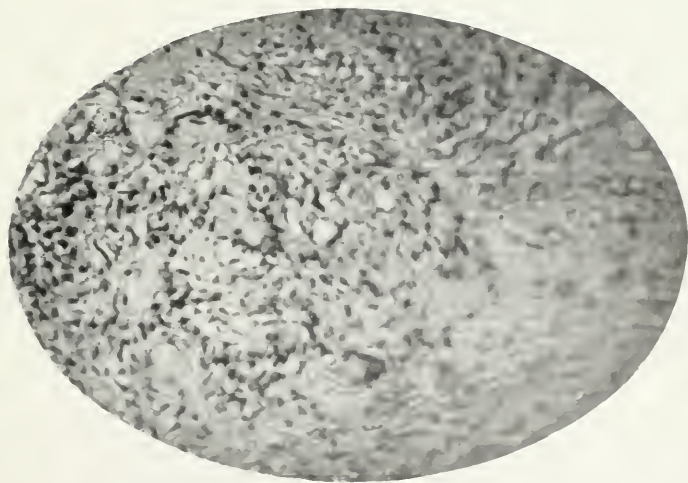


FIG. 5.  
 Peridontitis Mucosa Necrotica Recurrens.  
 Giant cells of the tubercle type in a recently detached plug.



It is probable that the disorder is tuberculous in origin, although the search for positive evidence has been without result in this instance. The course of the disease strongly points to a long standing, general intoxication, which periodically gives rise to acute local manifestations, intensely inflammatory in character. At present I would place it in the second group (under tuberculides) of Charles J. White's classification of the cutaneous affections due to tuberculosis. (*Boston Med. and Surg. Jour.*, cliii, p. 291.)

I am indebted to Dr. W. K. Trimble, of the University of Kansas, for the Wassermann report, and to Professor A. M. Barber, of the same institution, for laboratory courtesies. I am under obligations to Professor Louis A. Duhring, and Dr. Jay Frank Schamberg, of Philadelphia, for valued suggestions, and particularly to Dr. William H. Welch, of Baltimore, and Dr. Sigmund Pollitzer, of New York, for advice and aid in the pathological work.

610 Commerce Building.

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## FIBROMA MOLLUSCUM, OR UNIVERSAL NEUROFIBROMATOSIS.\*

By A. RAVOGLI, M.D., Cincinnati.

**T**HIS subject has been chosen for the purpose of reporting another case of this kind, which came under our observation in our service in the Cincinnati Hospital. The affection is of rather rare occurrence and every case has its scientific interest.

The patient, L. W., white, forty-six years old, was admitted into the hospital for neuritis of both legs. The condition of the skin attracted the attention of the attending physician, and so he was referred to the dermatological service.

**HISTORY.** He was the youngest child in the family; his next brother was fourteen years older. When he was born his mother was forty-two years of age and his father was over sixty. The father died with cancer of the stomach; the mother died of senility. One brother and one sister are still living and in good health; three brothers have died with tuberculosis of the lungs. No one in his family has ever shown any abnormality of the skin. He has been always

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

well; he was married at the age of twenty-five, and has three children all in good health.

He claims that the tumors have been present since his birth; at least in so far as he can remember his skin has been always studded with them. He also believes that they have always been of the same size and in the same number. A glimpse at the photographs (Figs. 1-2), however, will show that the tumors are at different degrees of development. Some are in their beginning, some are fully developed, some are gradually receding, and innumerable pigmented spots are witnesses of tumors which have disappeared. In some instances they are pedunculated, hanging to a soft and movable pedicle; others are sessile, imbedded in the skin, and hard and elastic to the touch. A look at the patient is sufficient to establish the diagnosis of fibroma molluscum.

The patient is not a strong man, nor is he well nourished. His complexion is very dark, sallow and yellowish; his hair and iris are black. His face has a peculiar sad expression. He is rather tardy in his replies, but his intellectual functions are normal. The skin of nearly the whole body is studded with innumerable tumors, some small, flat, and round, others large, elongated, and protruding from the normal skin. The forehead is crowded with small tumors, of the size of split peas, flat, round, and somewhat brownish in color. The face, the neck, the scalp, and the shoulders show the same tumors grouped together. In the chest and abdomen some of the lesions have assumed sufficient development to reach the size of a hazelnut, and even that of an English walnut. The upper portion of the body, face, chest, back, arms, and wrists are much more affected than the lower extremities. Some cases have been reported where the lesions were so numerous on the legs as to resemble an elephantiasis. On taking the tumors between the fingers, they appear to be soft and elastic; some even feel doughy. They are covered with skin normal in color, with the exception of the larger ones, which show a reddish-brown hue, due to stasis.

This peculiar disease was mentioned by Galen as one consisting of soft, fleshy, glandular, exudating warts. In 1793 it was described by Ludwig and illustrated by Tilesius in one case, where the body was covered with soft warts or mollusca. The nomenclature of molluscum was adopted by Bateman and Tilesius who added that of molluscum pendulum. Virchow,<sup>1</sup> on a pathological basis, called the affection molluscum fibrosum, or fibroma molluscum. The tumors are



made up of connective tissue, covered with normal skin, though at times somewhat pigmented, and somewhat hard to the touch.

The affection begins at birth or in early childhood; it may also be congenital as in a case reported by Jakowlew,<sup>2</sup> of a newborn babe with 230 fibromata on the skin. In our case the appearance of the mollusca was either at the time of birth or in his childhood, as he stated he had had them all his life. In a case communicated by Romanowski<sup>3</sup> of a man of forty-six, the affection began to develop after the age of ten.

According to Joseph<sup>4</sup> the mollusca are often found accompanied with *nævi* and telangiectases, which he thinks indicate that the disturbances of the nerves go together with those of the blood and of the lymph vessels. Indeed, at times the neurofibromata have been confused with maternal *nævi* and also with keloids, which are entirely different in their clinical and pathological appearance.

**ÆTIOLOGY.** The origin of this disease is still shrouded in mystery. From its beginning in early childhood or from its congenital existence, it suggests a congenital or a hereditary alteration in the system causing deformity of the mesoblast. Heredity has been considered a great factor in this disease by Herczel,<sup>5</sup> Bruns,<sup>6</sup> and Czerny.<sup>7</sup> Pearse<sup>8</sup> reported a case where mother and son were affected by fibromatosis, and Menke<sup>9</sup> referred to another case where grandmother and son were affected in the same way. Trimble<sup>10</sup> showed two cases of fibroma molluscum affecting a mother and her daughter. The mental condition has been taken into great consideration as a factor or at least as connected with the ætiology of this disease. Hebra<sup>11</sup> stated that in all the cases of this disease there is a peculiar stamp in the expression of the patient, and there is a deficiency in the physical and psychical condition. Benaky<sup>12</sup> and Kracht<sup>13</sup>, in reporting cases of molluscum fibrosum, pointed out the mental deficiency of the patient. Briquet<sup>14</sup> and Cherigie consider as an essential feature of the neurofibromatosis congenital or hereditary nervous disturbances either of the intelligence or of the motility or of the sensibility. Campana, on presenting a case of multiple fibromatosis, stated that all patients were neuropathic, and in a lady patient he found exophthalmic goitre. He found that this condition was due to a neuropathic condition of the skin.

Strube<sup>15</sup> admitted a fibromatous diathesis in the sphere of the peripheral nerves, which he considers to be the result of systemic alteration of congenital and also of hereditary origin. Strube<sup>16</sup> found that

cutaneous fibromatosis was associated with congenital alterations of the spinal cord. Adrian<sup>17</sup>, in a patient with neurofibromatosis, found miliary fibromata in the stomach, intestines, mesentery and also in the periosteum of the tibiæ, which he referred to a congenital anomaly of the nervous system, in the sense of Cohnheim. Brigidì<sup>18</sup> found round swellings on the ramifications of several nerves of the extremities, consisting of a hyperplasia of the endoneurium. The same condition of neurofibromatosis was found by Moynihan<sup>19</sup> in the vagus. Goldmann<sup>20</sup> is of the opinion that the sensitive fibres of the nerves are affected, as the alterations have been found on the posterior horns of the spinal cord and not on the anterior. Campana,<sup>21</sup> referring to a case of an ulcerative syphilide associated with neurofibromata, found the nerve filaments entering into the tumors greatly enlarged. He thought that syphilis might cause trophoneurotic alterations, capable of producing neurofibromata.

Heuss,<sup>22</sup> showing a case of neurofibromatosis, on account of the presence of abundant pigment called it "maculosa"; he considered the affection to be a variety of deformity on the order of maternal nævi. Neumann,<sup>23</sup> also, in presenting a case of this kind in a patient whose whole body was studded with mollusca, called attention to the innumerable lentigines, brown spots from the size of a pinhead to that of a lentil. The patient, though not showing intellectual defects, was affected with kyphoscoliosis. Rille,<sup>24</sup> too, maintained that a kind of relationship must be recognized between molluscum and nævus.

Hanshalter<sup>25</sup> claimed that neurofibromatosis was related to a form of splastic paraplegia and some anomalies in the sensibility.

Pierre Marie<sup>26</sup> and Chauffard<sup>27</sup> did not find manifest alterations in the nervous system, but they found degeneration of the capsule of the suprarenal glands and degeneration of the pancreas. Preble and Hektoen<sup>28</sup> reported a case of neurofibromatosis associated with arthritis deformans.

All authors agree on the point that the disease is connected with anomalies of the nervous system and with a degeneration of the organism. In our case the patient was suffering with neuritis of both legs. Fibromatosis had existed all his life, but he was only recently admitted into the hospital for neuritis. The man did not show any intellectual deficiency aside from being sad and sulky. He was born of parents in their old age, and was rather weak in his development. It is difficult to decide whether the neuritis of both legs could have any connection with the congenital deformity of the skin.

**PATHOLOGY.** Neurofibromata are always multiple, universally scattered, and not limited to any special region; neither do they show any peculiar disposition. They have a peculiar softness and a kind of doughy feeling. As long as they are small they have the same color as the skin; when gradually growing, they take a darker color on account of stasis. The tumors grow more on the regions of the body where the skin is loose, as on the abdomen, and on the back, while in places where the skin is tight they remain of smaller size. As long as the tumors are small they are movable, and under the exploring finger there can be found a kind of string, which is the nerve in the substance of the tumor.

The knowledge we have of the disease is due to the work of von Recklinghausen. It is through his clinical observation and his anatomopathological researches that neurofibromata have been separated from other fibromata of the skin of a different order.

They result from connective tissue, which Rokitansky thought to be produced by the deep intercellular spaces of the chorion; Fagge and Howse from the connective tissue of the follicles of the hair, and Virchow from the connective tissues of the fat lobules. Unna<sup>29</sup> remarked that the connective tissue, which forms the neurofibroma is of a different kind from that which forms the stroma of the skin. Indeed, even macroscopically these tumors are soft and transparent and very likely they are made up of connective tissue substance, which grows through the tissues of the normal skin. The mass of the tumor (Fig. 3) shows only a partial appearance of the tissues of the skin; the remainder is different. This hypertrophic tissue originates, according to von Recklinghausen,<sup>30</sup> from the interior of the nerve filament. The whole mass, growing in several strings, involves the organs which are supplied by the nerve, as the sweat glands, the blood vessels, the muscles, and the follicles and in thin fascicles invades the corium, and pushes up the epidermis. The original formation of the tumor in strings explains the mobility of the lesion in the beginning, and then the later fixation of the tumors in the skin.

The subcutaneous nodules as found by Vörner<sup>31</sup> in a small developing tumor show a plexiform structure, made up of strings of connective tissue with thin fibres, containing a large quantity of nuclei, the whole being adherent to the normal tissue of the skin. Unna has found nerve fibres scattered in the mass of the tumor. It seems that most of them are destroyed. Some are separated one from the other.

In fine sections it is possible to recognize the perineurium, which

on account of the growth of the internal substance is greatly enlarged. Ziegler<sup>32</sup> stated that frequently the nerve fibres cannot be seen in the mass of the tumor and because of the pressure they have wasted away. In our specimen (Fig. 4), there is easily seen the difference between the tissues forming the tumor, and the normal tissues of the skin. It shows a line of demarcation consisting of denser tissues, which form the capsule separating the tissues of the lesion. The tumor is made up of connective tissue much finer than that of the derma and contains a great quantity of nuclei. The corium, from the pressure of the gradually growing tumors, is stretched and made thin. In our illustration the normal papillæ have nearly disappeared, and the epidermis has been greatly reduced in thickness. The blood vessels are included by the strings of the growing tissues and are greatly distended. Figure 3 shows an enlarged blood vessel through the mass of the tumor. With a higher power the blood vessels appear filled with blood corpuscles, and a great many are cut in a transverse direction, showing the large quantity of blood. Near the skin we have found effusion of blood corpuscles (Fig. 5), which we believe to have occurred accidentally from some injury to the tumor. No stasis occurs, as no leucocytes are to be found in the tissues. In the substance of the tumor the fibrillary appearance is not as well marked as in other fibromatous growths (Fig. 6). Unna described peculiar mast cells, large and filled with a granular substance which he called spongioplasm. These appear also in our specimens and we consider them fibroblasts. Unna believes that the connective tissue cells of the neurofibroma undergo a mucinous alteration, which is peculiar to and characteristic of these tumors.

According to Davydow<sup>33</sup> the connective tissue cells of the skin, and also the connective tissue elements of the hair follicles and of the sebaceous glands are involved and take part together with the connective tissue elements of the nerve filament in the formation of the tumor. The sweat glands are somewhat pushed back by the growing mass.

Von Recklinghausen believes that the fibres of the nerve filaments have disappeared in the mass of the connective tissue, or at least their myelin sheaths have been lost. Von Recklinghausen and Kriege<sup>34</sup> maintain that neurofibromata are real fibromata which have their origin in the small filaments of the cutaneous nerves.

In Brigidi's<sup>35</sup> case, the neurofibromata were found on the nerve ramifications of the extremities, and consisted in hyperplasia of the



nerve sheath resulting from a proliferation of the connective tissue contained in the terminal filaments of the cutaneous nerves. Klebs, Delbanco, and Joseph believe that the change takes place in the medullary fibres of the nerve in fibrous fascicles, producing in this way the undulated appearance of the connective tissue. In some cases, as stated by Ziegler,<sup>36</sup> a neurofibromatosis is associated with a hypertrophic thickening of the connective tissue of the skin and of the subcutaneous tissue, resulting in alterations of the skin not unlike those observed in elephantiasis.

There is no doubt that these tumors have their own life. They develop as small, deep, subcutaneous nodules which gradually grow up to full-sized tumors. Gradually a regressive process takes place, they appear pedunculated, become soft, and under this regression disappear and in place of the tumor there remains but a dark pigmented spot.

In reference to the beginning of the affection, it is difficult to have any positive data. The disease causes no pain, nor inconvenience, and it is found often by accident while examining the patient for some other affection, rather than for the disease itself. Although we are positive that the neurofibromatosis is an affection of the terminal filaments of the cutaneous nerves, yet we do not know positively how it does occur.

The prognosis concerning neurofibroma has no great importance, this being true to such an extent that in several cases the patients have had no pain nor discomfort.

As to the outcome, Garré<sup>37</sup> maintains that in twelve per cent. of these cases the tumors may be changed into sarcomata, which opinion is shared also by Labbé and Lapeyre. Von Hanseemann in his experience has seen several patients affected with neurofibromata die with pulmonary tuberculosis.

In another case of neurofibromatosis we used injections of cacodylic acid, ten per cent. solution, every other day, apparently with some good results. In this case we also subjected the patient to the same treatment, but he wanted to be discharged, in order to return to his occupation, and the treatment was discontinued.

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FIG. 2.  
Fibroma Molluscum.



FIG. 1.  
Fibroma Molluscum.



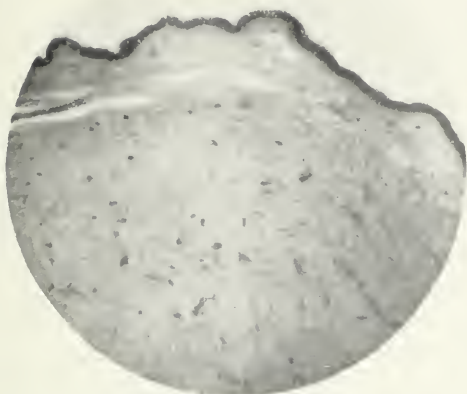


FIG. 3.  
Fibroma Molluscum.  
B. & L., Obj.  $\frac{3}{4}$ , Oc. 2.

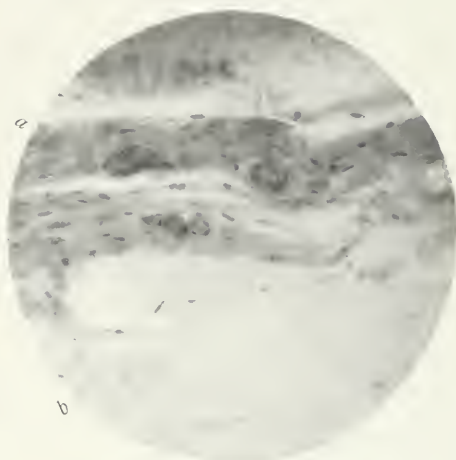


FIG. 4.  
Fibroma Molluscum.  
*a*, Hypertrophic connective tissue of the  
derma forming a line of demarcation.  
*b*, Tissues of the tumor.

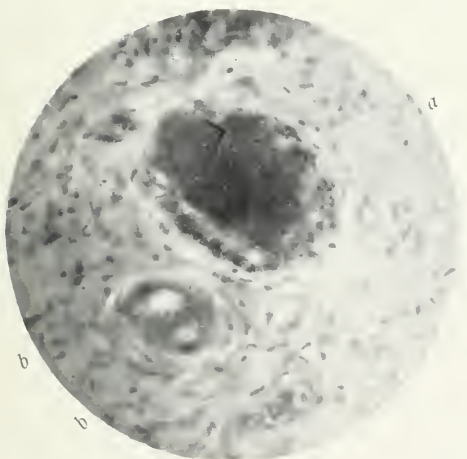


FIG. 5.  
Fibroma Molluscum.  
*a*, Large blood vessel filled with blood  
*b*, Fibroblasts.

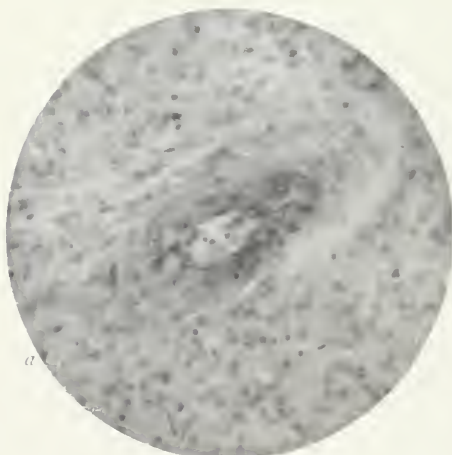


FIG. 6.  
Fibroma Molluscum.  
Fibrillary appearance of the structure of  
the tumor, *a*, Blood vessel surrounded  
by hypertrophic fibrous tissue.





## DISCUSSION.

DR. GOTTHEIL said that while neurofibromatosis was a well-sounding name, the question was whether it was appropriate. The speaker said he had examined these tumors in two or three cases, notably in one case seen at the City Hospital which Dr. Fordyce had photographed, and which was included in their photographic exhibit at this meeting.

In the small tumors, Dr. Gottheil said, they found something which they could not demonstrate as anything but pure fibroma, without any connection with the nerve sheaths. In the larger growths there was myxœdematous degeneration. In none of the three cases did they find any distinct connection with the sheaths of the nerves, and there were no nerve fibres in the tumors.

DR. DUHRING thought we should view this matter from about the following standpoint: The average case of this disease, which had been reported from time to time for many years, represented an affection which was somewhat different in its type from that reported by Dr. Ravogli. It was questionable whether the average case was other than that of a simple fibroma. The majority of these cases might be classed under the head of simple fibroma molluscum, and thus differentiated from neurofibromatosis. In the average case of the former there were no subjective symptoms, and in the course of the disease there might in time be retrogressions or other changes. Some of these cases had been kept under observation for ten or twenty years without the occurrence of pigmentation, while in others, pigmentation occurred quite early. In some the disease began in childhood, but in most cases later in life. In this disease, as in mycosis fungoides, we had several varieties and aberrant types. In the so-called von Recklinghausen's disease, in the few cases the speaker had seen, chiefly in Europe, the pigmentation was marked; it was in this degree of pigmentation that they chiefly differed from the other types so familiar to observers. As Hebra and Hutchinson had pointed out years ago, the affection was most common in persons who were mentally deficient, and personally, Dr. Duhring said, he could not recall having ever seen a case in an alert man, with a highly organized nervous system. In most instances the patients were more or less stupid or dull, and often not able to give a clear account of their condition. The lesions, apparently, gave them no inconvenience, and ordinarily they paid but little or no attention to them. What relation this impaired mental development had to the pathology of the disease he was quite unable to determine. He had certainly seen some cases in which the lesions were not associated with special affection of the nerves.

DR. RAVOGLI said that most of the writers on this subject did not make much distinction between fibroma molluscum and neurofibromatosis. In his own case, the lesions had their origin from a deep subcutaneous nodule, developing into peculiar growths which were composed of connective tissue fibres, and for that reason he called them fibromata. He had made careful and repeated search for the nerve fibres without finding them. Unna had spoken of finding the nerve cells, and von Recklinghausen made the statement that these nerve fibres gradually disappeared on account of the pressure of the tumor. There was no doubt, Dr. Ravogli thought, that the nervous system had a great deal to do with the production of these tumors. In another case of neurofibromatosis, which he reported in the *Cincinnati Lancet-Clinic* in 1899, the patient was mentally deficient and suffered from melancholia. His physical condition, on the contrary, was good.

Dr. Ravogli said that while he could not explain what the relationship was, he was convinced that the nervous system had much to do with the production of this disease.

## ISOLATION AND GROWTH OF THE ACNE BACILLUS.

By

E. D. LOVEJOY, A.B., M.D., New York,

Assistant Surgeon, Department of Dermatology,  
Cornell University Medical College,

and

T. W. HASTINGS, A.B., M.D., New York,

Professor of Clinical Pathology,  
Cornell University Medical College.

THE acne bacillus, although originally discovered by Unna, in 1893, must still be regarded as one of the newer bacilli, owing to the fact that the difficulty of growth has, up to the present time, rather prohibited any extensive study or use of it in vaccine therapy.

The bacillus, originally observed in pus smears in 1893, was first cultivated in 1897, by Sabouraud, and later by Gilchrist in 1899, who further continued the study by successfully producing suppurations in animals by inoculations with living cultures. From that time until 1909, little appears to have been done with it, when Fleming grew it aërobically and employed it quite extensively in the treatment of acne according to the vaccine method of Wright.

The bacillus itself is a rod-shaped organism, in length from 1 to 4 microns and about  $\frac{1}{2}$  micron in width; in pus smears it stains fairly homogeneously and tends to lie singly or in pairs, often assuming the end-to-end arrangement seen in the tubercle bacillus. The numbers found in a given smear vary greatly, some cases producing a relatively large proportion in relation to the staphylococcus, and in others only a few will be found after prolonged examination. The older forms soon show a dark-staining spot at the extremity, usually one at each end, but occasionally more of these appear, giving the bacillus almost a chain-like appearance, for as the dark spots appear, the rest of the bacillus stains lighter. These spots are, however, according to all the investigators, not spores.

The bacilli stain best with Gram's stain and are a weak positive—that is, the bacilli give up the blue color much more readily than other organisms will—also in one smear which was examined, the

peculiar appearance was produced of a red counter-stained bacillus with blue spots at each end.

As already mentioned, the bacillus can generally be demonstrated in the greater proportion of cases, although it appears much more abundantly in the early lesions, as the comedone and small, beginning, superficial pustule; in the large, pustular lesions, the number is relatively smaller. A small proportion of cases, however, do not appear to show them, or else they are more difficult to demonstrate.

The bacilli are also found in the sebaceous secretion of apparently healthy skin, especially around the alar folds of the nose, and the sebaceous plugs expressed and stained will show almost pure cultures, which may be cultivated as readily as those obtained from pathological lesions. What bearing the presence of the bacillus in the healthy skin has upon the pathogenicity of the organism, remains to be worked out.

As has been demonstrated by Hartwell and Streeter, the bacillus is undoubtedly an anaërobe, and with this fact in mind, the difficulty of cultivation is largely overcome, for although it can be grown aërobically, it requires much more care and even special media.

The preference of the bacillus seems to be for media of the gelatine-agar nature, or for broth. In a series of experiments carried out with this point in view, it was even proved that it can be grown on ordinary gelatine at room temperature, but this was in a deep stab culture and, after several days, that one small, feeble colony was obtained at the extreme lowest point of the stab. This fact coincides with the statement of Hartwell, who says that aërobically, the bacilli will grow only when planted in heavy masses, or stab; which is practically an anaërobic condition.

#### THE RESULTS OF DIFFERENT MEDIA SHOW:

1. BROTH (plain or slightly acidulated). Granular precipitate appearing at about the end of two days, but no clouding of media.
2. DUNHAM'S PEPTONE. Similar appearance, but no production of indol.
3. LITMUS-LACTOSE AGAR: LITMUS-MILK. Showed no color change whatever, although the bacillus grew feebly.
4. CONRADI MEDIUM. Also showed no change.
5. GELATINE. This was not liquefied, although a slow growth appeared.
6. PLAIN AGAR, OR 2% GLUCOSE-AGAR. This seems to give the easiest and best results.

Under cultivation, the organisms appear as gray-white, roundish, heaped-up colonies increasing slowly, but more by inner tumefaction than by peripheral extension. These appear to grow almost

indefinitely on the same media without transplantation, and the older colonies take on a pinkish coloration which is, however, later lost and gives place to the dirty gray-black color observed on the outer end of comedones.

Another marked peculiarity of the growing colony is the extremely slight adherence to the media; in fact, it is quite possible to push the entire colony along the media, where it will remain and continue its growth.

To grow the bacillus, material from pustules, or large comedones should be planted on slant tubes in three or four masses; the tubes rendered anaërobic by Wright's or any other laboratory method, and grown at ordinary incubator temperature. At the end of about three days, a mixed growth of small gray-white colonies of acne bacillus and the larger, whiter colonies of staphylococcus will be present, the former generally appearing at the edges of the albus. Then by careful transplantation, they may be isolated, and grown in the same manner in pure culture.

Later on, we hope to be able to report on a series of cases treated by the acne and staphylococcic vaccines, as compared with those previously treated by the staphylococcic vaccine alone.

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#### REMINISCENCES.\*

A Memorial Sketch of DR. HENRY GRANGER PIFFARD.

By GEORGE HENRY FOX, M.D., New York.

*Mr. President and Gentlemen:*

I beg your attention this evening to a few words in memory of our deceased honorary member, Henry Granger Piffard, M.D., LL.D.

It is difficult to realize that our friend and associate of many years has gone. It is disheartening to think that so great a store of vital force, of mental energy, and of varied learning has been forever dissipated, and it is sad to know that never again at any meeting of this Society will he

\* Read before the New York Dermatological Society, November 22, 1910.



drop in unexpectedly, and excite those sensations of respect, amusement, and surprise which we have so often experienced. I have taken the liberty of speaking of him because I was his sincere friend for nearly forty years and have, perhaps, been more closely associated with him than any other member of this Society and yet I am in some doubt as to whether I or any of us really knew him and appreciated fully the various phases of his many-sided character.

I first met Dr. Piffard in the Skin Clinic of the University College Hospital in London and was casually introduced to him by the physician in charge, Dr. Tilbury Fox. He was then a young man, tall, straight and handsome. If I remember aright he had black and curling side whiskers which he certainly wore in the early years of our acquaintance. When I came to New York a year later I found that he was a most active member of this Society and was preparing his "Elementary Treatise on Diseases of the Skin." It was then that our life-long friendship began and I felt highly honored when in 1875 he asked me to serve as his assistant at the University Medical College where he was Professor of Dermatology for many years. His clinics were always interesting, in spite of the paucity of material, as he was a forceful if not an elegant speaker.

And this reminds me of my first dermatological lecture, if such it might be called. One day, just before the hour of the clinic, Piffard sent me word that he was going out of town and asked me to take his place. It was a cold and rainy November day and when I reached the College my gradually increasing trepidation was not at all lessened by the fact that there was not a single patient in attendance. Fortunately I had in my pocket an alphabetical list of skin diseases and so, after an humble apology to the class for my undesired appearance, I proceeded to tell them all I knew about every dermatosis from acne to zoster and I trust that you will not accuse me of boasting when I say that I nearly filled the hour.

The most striking characteristic of Dr. Piffard was his remarkable brilliancy of intellect. Just as he had the power and often the desire to eat strange things at odd times and places to an extent that was appalling to ordinary gastric sensibility, so he possessed the power to grapple with new and strange problems and to take a mental grasp of complex subjects which, to most of us, seemed far beyond our reach. He was a thorough student, yet far removed from the familiar type of the laborious "grind." He found delight and recreation in his various studies and brought a keen perception and analytical power to bear upon most of his recreations. His library he regarded for use rather than for show and his office always suggested a laboratory rather than a formal consulting room.

At one time he was captivated by the idea, which most of us have entertained and relinquished, that it would be a grand thing to have a



complete dermatological library. He began at once to collect foreign works on skin diseases. He was a fair German and a better French scholar but knew very little of Italian. To supply this deficiency he at once subscribed for one or two Italian medical journals, selected a teacher, and attacked the language with his customary vigor. Happening to run across an advertisement of some book entitled something like "*Trattato della pelle et cetera*" he gave his bookdealer an order for it. The bookdealer, in a polite note informed him that this was an expensive work, published by the Italian government, and that it would take several weeks to import it. Piffard replied in language possibly more vigorous than polite—that expense be damned and that when he wanted a book he expected his dealer not to talk about it, but to get it. In about two months, during which time his knowledge of Italian had rapidly increased, the book arrived and with it a bill for about sixty dollars. To his surprise and dismay he discovered at first glance that it was not a strictly dermatological work but an elegantly bound and elaborate treatise on the tanning of hides. Piffard came over to me and laughingly told me this experience under strict promise of secrecy but the story was too good to keep.

Another striking characteristic was his remarkable will power. Whenever he set out to accomplish a purpose, laudable or senseless as it may have seemed to others, he found no obstacle which could daunt his energy. In the case of every new "hobby" which pleased his fancy, and he mounted many such, he was wont to work night and day with his whole heart and soul and body until he attained his end. And he was never content, as so many are, with acquiring a mere smattering of a subject—a slight knowledge that might serve to impress the ignorant, but he usually delved to the root of the subject and strove to master its most intricate details. And this, by dint of his peculiar perseverance, he would often accomplish in the short space of time which most of us would consume in preparing to begin our study.

I have never known of but one task which he undertook and was forced to acknowledge an utter defeat. When a young man, as I've been told, he was seized by the then prevailing craze to play the banjo. Dobson or some other professor was advertising proficiency in six easy lessons. Piffard, entirely unaware of the important fact that he had little or no music in his soul, decided to court the "heavenly maid" in her guise of sheepskin and catgut. He called on the Professor, bought an expensive instrument, took his first lesson, and started home with high hopes and a small music book. The latter he read carefully and doubtless committed to memory. The position of his fingers on the frets, as shown him by the Professor, he practised through many spare hours for a week, and then went proudly to his second lesson, eager to show how much he had accomplished. The Professor listened to his pupil's performance

with an expression of sober surprise. Then seizing the banjo he strummed it for a few minutes and inquired, "Doctor, do you know what tune I am playing?" "No, I don't," said Piffard with perfect truthfulness. "Well, Doctor, there is no use in going any further, I just played 'Carry me back to Ole Virginny,' the tune you have been practising for a week—and can never learn. Now I'll buy your banjo back for half price and charge you nothing for the lessons provided you will never tell anybody that you were a pupil of mine."

Geniality was another striking feature of Dr. Piffard's character and endeared him to a host of friends. This was not a studied politeness shown to every one he chanced to meet, but it was the outflowing of a warm heart to those with whom he had even a slight degree of intimacy. To be sure, his peculiar temperament often led him to disagreement with and temporary estrangement from some of his best friends, but he was always ready to acknowledge an error on his part and prompt to forgive and forget. His individual likes and dislikes were usually strong and sometimes unaccountable, but he would never stoop to do an underhand act to anyone however hostile and never was heard to say anything behind a man's back which he was not ready, if not anxious, to say directly to his face. He was a lover of peace and good will in spite of a goodly though latent supply of combativeness.

In the regulation of his practice of medicine in New York City Dr. Piffard always took a deep interest and exerted a powerful influence. In the celebrated Code fight, which agitated the medical profession of this State a quarter century ago, he was in the foremost of the fray, but his generalship in medical politics always suggested the brilliant dash of a Sheridan rather than the quiet persistence of a Grant. In short, he was a good fighter but a poor tactician.

During my long acquaintance with Dr. Piffard he was never without a "hobby." And with him a "hobby" was not a mere amusement or pastime, but something to which he could devote all the energy of his restless mind and tireless body, and from some scientific phase of which he usually succeeded in deriving more or less profit as well as pleasure. Microscopy, tablet triturates, medical politics, botany, canoeing, photography, bicycling, fishing, rifle shooting, mushrooms, Esperanto and radiotherapy were some of the varied fields in which he labored with zeal and enthusiasm, and in most of these he speedily became an acknowledged expert. Had he only persisted in his devotion to certain of these studies he would undoubtedly have attained the highest pinnacle of eminence and found himself without a rival. But, unfortunately, he seemed satisfied when he had accomplished the solution of some minor problems and was ever liable to start suddenly upon some new and untrodden path which chanced to open before him and to appear inviting. One could always tell the nature of his latest "hobby" by the appearance of his office.

When I first used to visit him I generally stumbled over a number of galvanocauteries and had hard work to find a chair unoccupied by zinc and carbon plates or unspotted with bichromate solution. Later, I have seen a fishing rod in each corner and reels upon almost every shelf of his library. Again I have noted at least a half dozen rifles of various makes and failed to count the cartridges scattered upon his office desk. In recent years the rods and the guns had gradually disappeared. The microscopes and the mounted photographs still clung to his desk like old friends, but the general aspect of his office had changed and was more suggestive of an electrical show at the Madison Square Garden.

When his attention was mainly devoted to rifle shooting I used to go with him to various ranges where his scores, owing, perhaps to defective eyesight, were never remarkably high. But when night came and most of his fellow riflemen were devoting their time and attention to other things, Piffard still clung to his "hobby," and as a result of much nocturnal study invented an apparatus designed to lessen the effect of gun recoil and elaborated an article on projectile power which I have understood was regarded by certain Army officers as a most valuable and authoritative contribution to the subject.

During the course of his piscatorial fever I used to go with him to the Aquarium, which was then where the Herald Square Theatre is now located, and listen with surprise to his learned disquisitions on ichthyology. I remember well one cool autumn evening when writing in my office on Thirty-first Street the door bell suddenly rang with a vehemence which suggested a patient in dire distress, or more likely Piffard. Hastily entering he said: "Come, George, let's go fishing!" I smiled at what I thought was a rather poor joke but he added, "I'm in earnest. They say the striped bass are running in the lower bay by the millions. Stop your writing. I've got tackle for two, and it's past nine o'clock now." In vain I protested that it was too late and too cold and that I had work to do. "I'll be back in ten minutes with the rods and bait and you be ready," and out he went. I did not feel in a mood for fishing just then, but my evening's work seemed upset and I concluded to go. It took over an hour for the little tinkling horse car to get us to the foot of Broadway, this being before the days of electric cars or subway, and there at Hamilton ferry, between the coming and the going of the boats, we fished an hour or so for striped bass and actually caught a score or two. As it grew later and colder I said, "Come, now, we've got enough for breakfast, let's go." "What! are you cold? Take my pole." Saying this he suddenly disappeared, leaving me with the two lines to reel in as a ferry boat was approaching. I found a somewhat sheltered corner of the covered dock where I stood and shivered. Ten, fifteen minutes seemed an age, and just as I had concluded to start home alone, in rushed Piffard with a huge greasy pasteboard box partly filled with hot fried oysters and with

bottle necks protruding from his side pockets. The raw temperature was quickly ameliorated and two families enjoyed striped bass for breakfast.

Dr. Piffard was distinctly a creature of impulse and liable to do anything strange and unexpected, but to his credit be it said that he never, to my knowledge at least, played the races or speculated in Wall Street. Recently, as I watched the *aéroplanes* soaring and speeding a thousand feet or more above Belmont Park, I could not refrain from thinking constantly of Piffard and of the intense interest which sooner or later he would certainly have taken in aviation as a sport and as a study.

Suddenly and unexpectedly, as he was wont to do things, our friend and colleague left us "for that bourne from which no traveler returns." The place which he occupied among us can never be filled save by the fragrance of tender memories. However we may have disagreed with him in his opinions on many subjects, however we may have been disposed at times to criticise his actions, we have always been compelled to pay homage to those qualities of mind and heart which lifted him far above the average of his fellows. And to-night, as we look back over the years of our association with him, we no longer note the rough edges of his sturdy character, but think of him only with a feeling in which is mingled both admiration and affection.

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## SOCIETY TRANSACTIONS.

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### NEW YORK DERMATOLOGICAL SOCIETY.

September 27, 1910.

WILLIAM B. TRIMBLE, *President*.

**Hereditary Syphilis.** Presented by DR. GEORGE HENRY FOX.

The mother had been married a year and a half. Five months later she had had a miscarriage. The baby who was three months old had developed the eruption a month ago. It consisted of a macular eruption of the face, buttocks and legs. There were striæ about the corners of the mouth, marked "snuffles" and dystrophy of the nails. The mother gave a strong positive Wassermann reaction.

The diagnosis was generally accepted, though Dr. Bulkley said that it was not a phase generally seen, the lesions being modified by a seborrhæic element.

DR. GEORGE HENRY FOX said that when he first saw the case, as the mother showed a Wassermann reaction, it was thought that the child probably had hereditary lues, but there seemed to be a combination of eczema and a luetic eruption, and the fact that the child had had no treatment excepting through the



mother, seemed to indicate the correctness of the assumption of a double diagnosis. There was no doubt about the child having lues. A nursing child received very efficient treatment through a mother who was taking mercury.

**Lupus Vulgaris.** Presented by DR. KINGSBURY.

The patient was a little colored girl four years of age. The parents were healthy and the child was bright and fairly well developed. On the left cheek there was a smooth, elevated, circinate patch three-quarters of an inch in diameter. An areola about one-quarter of an inch wide had been formed around the border of the lesion by the displacement of pigment. This must have been caused entirely by recent growth of the lesion, as no local applications had been made. The disease was said to have started from several small "pimples" when the child was about one year of age. Recently the patch had increased somewhat in size.

DR. BULKLEY said that he would like to know the result of "mixed treatment" on the negro child.

DR. GEORGE HENRY FOX suggested that some of the lesions be treated with a new method, and others with an old remedy, perhaps the acid nitrate of mercury.

**Lepra Maculosa.** Presented by DR. GEORGE HENRY FOX.

The case was that of a little girl previously presented to the Society. She lived in the South, and was growing larger and stronger each year. The cutaneous lesions had improved slightly under the continuous use of chaulmoogra oil; but in the brownish patches on the arms and thighs a number of depressed pigmentless discs had developed.

DR. HOWARD FOX said that he had a case under his charge that showed similar vitiligo-like lesions occurring in the centres of typical brownish anæsthetic macules. He hoped to present the patient at the next meeting of the Society.

DR. SHERWELL said that these seemed to be retrograde, atrophic phenomena peculiar to the disease. The girl seemed to be improving in every way. He remembered the case Dr. Fox spoke of, and although the ultimate end of that case was death, there were retrogressive periods, causing, it seemed to him, the atrophic patches referred to.

DR. BULKLEY said that a year ago Mr. Early was presented. He had not seen the patient for several months, but he was now in the far West, absolutely free from disease of any kind. The speaker said that he would report on the case of Mr. Early each year, if possible.

DR. G. H. FOX said that in ordinary cases of macular leprosy the brown patches usually remained for years without the development of white spots. He had seen only a few cases in which these spots had developed.

Replying to Dr. Sherwell's inquiry as to whether the spots were anæsthetic, Dr. FOX said there was little if any difference between the sensibility of these depressed spots and of the surrounding dark patches.

DR. TRIMBLE said that Dr. Bulkley's little patient with the ichthyotic condition had some spots not unlike those on Dr. Fox's case.



**Alopecia Areata and Fordyce's Disease.** Presented by DR. KINGSBURY.

The patient was a tailor, twenty-six years of age; born in Austria. The man had had typical bald patches on the scalp and face for nearly four months, but he did not know how long his lips had been affected. The latter eruption was practically confined to the upper lip, and here the lesions were of interest, on account of their large number. They were so closely aggregated that nearly all of the surface was covered.

**Tuberculosis Verrucosa Cutis.** Presented by DR. KINGSBURY.

The patient was a school girl, of Russian parentage, twelve years of age. She was short, obese, and of impaired mentality. The right hand was said to have been affected for over four years. A patch about the size of a silver quarter was located on the base of the index and middle fingers, and a similar lesion between the ring and little fingers. On the flexor surface of the wrist there was a patch about one inch wide and extending upward on the forearm nearly two inches. There were also several small circular patches on the back of the hand, varying from one quarter to half an inch in diameter.

DR. SHERWELL suggested the use of acid nitrate of mercury. The result would be satisfactory and the treatment not painful.

**Case for Diagnosis.** Presented by DR. KINGSBURY.

This case was one from the private practice of Dr. T. Neafsey, to whom Dr. Kingsbury was indebted for the following history: D. G., twenty-six years of age, bricklayer, born in Ireland. The man complained of a swelling of the face and reddish blotches under the eyes, especially the left. He stated that his mouth had been sore for one year and that the swelling of the face had been present for a somewhat longer time. The condition was said to have started after the extraction of an upper molar. Ulcerations on the buccal membrane, soft palate and tongue appeared so like specific lesions that the man was put on large doses of potassium iodide and with this treatment the swelling of the face decreased and most of the ulcerations healed. Owing, however, to certain renal symptoms the potassium iodide was discontinued and soon the swelling returned. The man stated most positively that he had never had sexual intercourse but said that he had frequently smoked a pipe direct from another's mouth.

When presented before the Society, the man had considerable œdema under the eyes and the nose and upper lip were also affected. The ulcerations in the mouth were rather superficial.

Dr. Kingsbury said that the case had been sent to him about a month ago for an opinion; he had regarded the swelling as being of nasal origin and had advised local treatment. A capable rhinologist had examined the man and stated that he had been unable to detect any pathological con-

dition that might account for the symptoms. Dr. Kingsbury said he did not believe that the patient was syphilitic.

DR. JACKSON thought it a chronic lymphatic engorgement, due to some lesion in the mouth or nose. He did not like to use such names for this condition as pseudo-erysipelas or chronic erysipelas. It was not the so-called erysipeloid, but was analogous to elephantiasis as seen in this country.

DR. HOWARD FOX thought the name elephantiasis could properly be applied to this case. Like some cases of elephantiasis of the legs it was due to increasing lymphatic stasis due to recurring attacks of erysipelas.

DR. WINFIELD thought it some kind of erysipeloid affection.

DR. KLOTZ said that he had seen such cases in connection with deep-seated bone affections of the nose.

DR. SHERWELL thought it was an erysipeloid condition affecting the lymphatic circulation, which would get better under antiseptic treatment, and under iodide of potassium. The iodide would not be given for any specific action, but for promotion of the mucus flow, thereby clearing the crypts and nasal passages.

DR. BULKLEY said that he liked the name pseudo-erysipelas. It seemed to be a pus infection from the nose, via the lymphatics. He had seen similar cases checked by proper treatment within the nose.

DR. GEORGE HENRY FOX said that he disliked the use of the term erysipeias in connection with such cases, for they had nothing in common with true erysipelas. After the legs and arms, elephantiasis was most apt to affect the face, and often in connection with disease of the mucous membrane or bones of the nose. He thought that in time this man would probably develop a well-marked elephantiasis of the face.

DR. TRIMBLE said that he had seen several cases in the clinic during the past year, and they were spoken of as chronic lymphangitis, in contradistinction to acute lymphangitis. He agreed with the former speakers as to the probable cause of the condition.

#### Epithelioma; Showing Results of a New Method of Treatment. Presented by DR. BULKLEY.

This patient, a woman of about forty years of age, with an epithelioma on the right temple, had been under applications of a mixture containing thorium, which had caused the disappearance of the lesion almost entirely. There was still some evidence of the disease on one side, but with the progress that had been made, it was believed from experience in Paris, that it would yield completely.

DR. FOX said that he felt much interested in all new remedies, but thought that they should be tested side by side, with some old and approved remedy with whose effect all were familiar, in order to compare results. He would like to see this case and Dr. Kingsbury's case treated simultaneously with the new remedy and acid nitrate of mercury or some other efficient remedy. The result would be of great interest, and we could then judge exactly the effect of the new remedy.

#### Lupus Vulgaris. Presented by DR. BULKLEY.

Elsie Sonza, nine years of age, gave no history of tuberculosis or syphilis, but was somewhat stunted in development, and had long been troubled with a discharge from the nose and inflammation of the tonsils. Two years ago a small red lesion occurred near the tip of the nose,

which gradually extended, until it involved one-third of the nose and the upper lip. When she entered the hospital, several months ago, the nose and lip were covered with crusts with a moist surface beneath, rendering the diagnosis very difficult. On the centre of the soft palate there was and still remained a tolerably characteristic patch of lupus. As the surface of the lip and nose healed, under appropriate treatment, the true characters of the disease appeared. She exhibited a tuberculin reaction on June 10th. She had had X-rays with much advantage, and recently some of the remaining lesions had been yielding rapidly to the application of a paste containing thorium, which had been used in Paris with remarkable success.

**Case for Diagnosis.** Presented by DR. BULKLEY.

Mrs. Yetta Punsck, widow, seventy years of age. Nine weeks before admission to the New York Skin and Cancer Hospital, she began to have superficial vesiculo-pustular lesions about the root of the neck, which increased and developed elsewhere, until her admission to the hospital a week ago.

On admission the eruption had involved the upper chest, axillæ, bends of the arms, beneath the breasts, the genital region and the legs to some extent. The lesions were purulent bullæ, many of which had ruptured, leaving raw surfaces, some of which tended to heal easily; others remained raw. It was looked upon as a pyodermic affection, and in places seemed to yield to mild white precipitate ointment. But new lesions continued to develop, until now there were many raw areas, accompanied with much pain, over the regions first affected, with new lesions developing elsewhere. These were now larger and in the form of flaccid bullæ, an inch or so in diameter, with purulent contents, not sharply defined, though more suggestive of pemphigus.

In reply to an inquiry from Dr. Winfield, Dr. Bulkley said that no culture had yet been made of the contents of the lesions.

Dr. JACKSON said that it seemed very much like a case of pemphigus, but he was willing to accept the exhibitor's diagnosis of a septic infection of the skin. In old people with lowered resistance we sometimes saw such conditions due to ordinary pus organisms.

Dr. KINGSBURY also thought that it was pemphigus.

**Lepra Tuberosa.** Presented by DR. GEORGE HENRY FOX.

Sam Vernick. This patient had been presented to the Society before and attention was now called to the flattening of the nodules upon the arms due to the application of chrysarobin ointment.

**Very Extensive Psoriasis Resulting in Exfoliative Dermatitis.** Presented by DR. BULKLEY.

A. Manuli, aged twenty-five, had had psoriasis for twenty years, with gradually increasing severity, until the present most severe condition

had resulted. When he entered the hospital, two weeks ago, the entire surface, including the head and extremities, was the seat of a pretty evenly reddened skin, dry, with abundant scaling, and with considerable itching. In certain places the scales were heaped up and more white and psoriatic, but most of the surface was covered with reddened skin, with not a particle of normal integument. Under the profuse use of an ointment containing lanolin, the condition had changed materially, and now there were none of the scales indicating psoriasis. He had suffered a good deal from itching.

DR. JACKSON said that it seemed to him to be exfoliative dermatitis, secondary to psoriasis.

DR. SHERWELL agreed with Dr. Jackson.

DR. GEORGE HENRY FOX said that a case of universal psoriasis was extremely rare, if it ever existed at all. He thought this a case of exfoliative dermatitis, following a general psoriatic eruption.

DR. BULKLEY said that the patient had been under very active treatment, baths, applications, etc., and had changed very much in appearance.

**Erythematous Lupus (Previously Exhibited).** Presented by DR. GEORGE HENRY FOX.

A most interesting and extensive case, in which the diagnosis was made from the lesions on the arm and scalp, and verified by a later development of typical patches upon the face.

DR. JACKSON said that he thought the patient would die of tuberculosis before very long, that being a common ending of such extensive cases.

**Lenticular Carcinoma.** Presented by DR. HOWARD FOX.

The patient was a woman, sixty years of age. A radical operation for removal of the right breast had been performed ten years ago. Ten months ago recurrences appeared about the chest, neck and shoulders. On the chest were seen numerous pea-sized, flesh-colored and brownish, solid, superficial nodules. Some of these were grouped along the scar of the former operation. Others were grouped upon the upper part of the chest at some distance from the scar. Over the upper part of the back were numerous dull-red, hard, subcutaneous masses. Most of these were rather diffuse, while a few were rounded and fairly well circumscribed. The patient was rapidly losing flesh and strength.

DR. BULKLEY said that the case was a unique one. One often saw the lenticular form of cancer, but he had never seen the two forms keep so separate as in this instance.

**Peculiar Pigmentation of the Face.** Presented by DR. GEORGE HENRY FOX.

The patient was a girl, twenty years old, born in Russia. The eruption first appeared when she was three years old. It was always worse in summer. It consisted of pin-point to pin-head macules mostly of a jet-black color, situated about the eyelids, nose, mouth, and chin. A few



lesions were present upon the backs of the fingers and hands. They were especially profuse about the angles of the mouth. They were also present upon the vermilion borders of the lips. The mucous membrane of the mouth was apparently normal.

DR. JACKSON suggested that it was a case of lentigo.

DR. HOWARD FOX thought that the condition was in all probability a nævus, as it had existed since very early life.

DR. GEORGE HENRY FOX said that the books all described a small, smooth nævus (nævus spilus), and this might be termed either multiple nævus or lentigo. It was certainly different in its appearance from ordinary freckles.

DR. JACKSON said he believed that lentigo was a permanent freckle, while epheles was a freckle due to exposure to the sun's rays, and was transitory.

DR. HOWARD FOX said that the possibility of xeroderma pigmentosum had been discussed at the clinic. The fact that none of her brothers or sisters had a similar affection would speak against that diagnosis.

#### Case for Diagnosis. Presented by DR. TRIMBLE.

The patient, a man near middle age, had had the present eruption for eight years. The lesions varied in size from a silver quarter to that of the palm of the hand; they were slightly scaly, non-infiltrated, and of a light-reddish color. They were situated mainly on the trunk. There were no subjective symptoms. Some of the lesions had a slightly brownish hue.

DR. KINGSBURY suggested that it might be a premycotic stage of mycosis fungoides.

DR. JACKSON said that it belonged to a group of cases that had many names. Brocq had placed them all under the generic name of parapsoriasis. They had certain features in common, such as faint redness, slight scaling, absence of itching, and extreme chronicity. He did not like the name, but it would do for a label. He would not call it mycosis fungoides.

DR. KLOTZ thought that if there were such a disease as *érythrodermie pityriasique en plaques disséminées*, this case belonged to it.

DR. TRIMBLE said that he had had two diagnoses in mind, one being premycosis and the other, pityriasis in patches, such as Brocq described. Cases of this kind were more frequently seen than heretofore, and whether all those with very slight infiltration, some scaling and no pruritus should be placed in one class and called parapsoriasis was a question. It would certainly have to be a very large group to contain all the cases with similar symptoms, which could not be diagnosed as something else. The condition suggested premycosis, though he could not account for the fact that there was no itching. The disease had not progressed since it first appeared, and there was no infiltration in the lesions. This absence of infiltration might possibly account for the absence of pruritus. Several cases which had been diagnosed abroad as parapsoriasis, had subsequently turned out to be mycosis fungoides.

#### Generalized Bullous Eruption From Ingestion of Potassium Iodide.

Presented by DR. HOWARD FOX.

The patient was a colored girl, eleven years of age. She gave a history of having taken, two months ago, some bitter medicine, in doses



of ten drops three times a day for a week. Upon the second day an eruption of "water blisters" had broken out and within four days had become generalized over the entire body. When she came to the Vanderbilt Clinic a month ago she presented an extraordinary picture resembling, at first glance, a *tinea imbricata*. The eruption then consisted of numerous pigmented, circinate, smooth lesions upon the face, trunk and extremities. There were a few pea-sized vesicles upon the neck. There was no coryza and no evidence of pustulation. The urine showed a trace of iodine. At that time the diagnosis seemed to lie between a bullous and circinate dermatitis herpetiformis and a bullous iodide eruption. To settle the diagnosis she was again given potassium iodide in doses of ten drops three times a day. After having taking two doses an eruption similar to the first one appeared. The patient discontinued the medicine after the fourth dose. A week later she presented an eruption of large, tense, clear bullæ upon the trunk and extremities, more especially upon the legs. The urine again contained iodine. The mucous membrane of the mouth also presented bullous lesions.

DR. JACKSON said that it was a very extraordinary case.

DR. DADE said that he had understood Dr. Fox to say that as there had been no coryza, that this was a point against iodism. He had seen very extensive bullous iodide eruptions without any coryza.

DR. SHERWELL said that at first, from the distribution and general appearance of the eruption, he thought it was dermatitis herpetiformis, but that the diagnosis of iodide eruption was probably correct.

### **Lepra (?). Presented by DR. SHERWELL.**

Dr. Sherwell said that he had not yet been able to make a positive diagnosis of this case, which was from Santa Lucia and which he had previously presented before the Society. He was desirous that Dr. Fordyce and some of the other members should remove one of the lesions and make a microscopical study. Some of the lesions had subsided but still itched intensely. The man had a wife dependent on him and a proper diagnosis was a matter of great importance.

DR. DADE said that a man who had so many leprous lesions on his face should certainly show some elsewhere.

DR. KLOTZ said that he could not think of any other disease but lepra that would bring out such an appearance of the face. It seemed to him at least mighty suspicious of that disease.

DR. WINFIELD said that he did not think it was a case of leprosy.

DR. JACKSON agreed with Dr. Winfield, and could see no evidence of leprosy whatever.

DR. SHERWELL said that the peculiar nodular tumors were very suggestive. When the man had been shown at the previous meeting there seemed to be a very decided agreement that it was a case of leprosy. The case had never seemed clear to him, and was not so yet. Of course a biopsy would settle the matter, and when this was made he would report the case again.

**Lupus Erythematosus.** Presented by DR. GEORGE HENRY FOX.

The patient, a young woman, presented a dermatosis of the scalp, arms and face. When she first applied for treatment the scalp was almost ulcerated, and there was a doubtful eruption on the arm, and a tentative diagnosis of lupus erythematosus was made. During the past three months she had been in the hospital and a characteristic eruption had appeared on the nose and cheeks confirming the diagnosis. She stated that lesions had been on the scalp and arms for over three years.

DR. DADE said that it was a very remarkable case, and reported one he had recently seen in which the eruption was located on the face and chest. That patient had acute pulmonary tuberculosis. Most of the diffused and acute cases of lupus erythematosus that had been published in the various journals had had tuberculosis. He suggested that a tuberculin test be made, and the patient kept under observation. The case that he had reported at the last meeting with lupus erythematosus of the scalp had tuberculosis also. Such cases supported the theory of tuberculosis being the cause of the disease.

DR. WHITEHOUSE agreed with the diagnosis.

DR. KINGSBURY said that the case was a very interesting one. He was surprised that there were not lesions elsewhere on the body, and thought that a thorough search might reveal them on the chest or lower extremities. These acute cases were often associated with serious organic disease and he thought that later this girl might develop nephritis or general tuberculosis.

DR. BRONSON told of a case presented some years ago where a girl had had repeated attacks of lupus erythematosus on the cheeks and forehead, which were peculiar in that they were of relatively short duration, lasting for some months. They were associated with tuberculous glands in the neck. Repeated operations for the removal of the glands were invariably followed by subsidence of the eruption, which would recur with the regrowth of the glands. The patient had slight pulmonary tuberculosis, together with the glandular affection.

DR. TRIMBLE said that he had seen this case at the Bellevue Clinic before she came to the Skin and Cancer Hospital, and she then had only the lesions on the scalp; later they appeared on the arms. He was inclined to agree with Dr. Kingsbury that the prognosis of the case was bad. It appeared to be the variety of erythematosus lupus that was sometimes associated with tuberculosis; and he thought these cases, that were known to be associated with tuberculosis, had furnished the reason why some of the profession at large had associated lupus erythematosus with tuberculosis. Although he had said the prognosis was unfavorable, he was compelled to admit that the patient's general condition had improved wonderfully since she had been in the hospital. She must have gained twenty or twenty-five pounds.

Replying to an inquiry from Dr. Holder as to how long these lesions had been on the arms, Dr. Trimble said that the lesions appeared on the arms while she was under observation at the Bellevue Clinic, and that was over a year ago.

The speaker said that the patient's mentality was very weak; she was practically simple minded, and her history, for that reason, did not amount to much.

DR. SHERWELL said there seemed to be a relation between some cases of lupus erythematosus and true tuberculosis. He cited a case of a healthy young girl with apparent lupus erythematosus of the face. The eruption also involved the mucous membrane of the mouth, larynx and trachea. The case had been presented before the New York Laryngological Society. In view of a possible tuberculous infection of the lungs he had continued his observation of the case,

but at the time of her last visit (some years later) she appeared to be in perfect health.

DR. GEORGE HENRY FOX said that years before Robert Koch had been heard of, Dr. Piffard used to point out that this condition was very frequently associated with cervical adenitis, a fact which he himself had often observed. At the time of the Koch excitement, many years ago, he had used injections in some cases of lupus erythematosus where there was no sign of tuberculosis of the lungs, and the reaction was as marked in lupus erythematosus of the face as in lupus vulgaris. In this case he had made the diagnosis of lupus erythematosus from the lesions on the scalp and arms before the eruption developed on the face.

### Ringworm and Alopecia Areata. Presented by DR. GEORGE HENRY FOX

The patient, a child, was brought to the hospital for treatment some months ago, with three patches of ringworm on the head. While in the hospital a large bald area developed, which suggested a diagnosis of bald ringworm, but it seemed to be a combination of ringworm and alopecia areata.

DR. JACKSON said that it was a very interesting combination. He had never seen such a case before, although he had read of them. The English had an idea that alopecia areata was a sequel of ringworm. Bald ringworm was not a type often seen in this city. It usually had the appearance of alopecia areata. This case might be one of bald alopecia.

DR. WHITEHOUSE said that if he had not had a similar case some fifteen years ago he would be inclined to think of alopecia areata and tinea tonsurans in the same subject. He had not seen another case since. He published an account of it at the time as ringworm of the scalp simulating alopecia areata. The boy, J. S., he considered as a case of alopecia areata until the circinate patches developed on the arm, and he was told by the boy's sister that there were a number of cases where they lived. He went there and investigated, and found several cases of characteristic ringworm of the scalp, and one little girl with a patch on the neck, and further observation and cultures revealed the ringworm spores in his case. He had not seen the bald patches and ringworm patches on the same scalp; though he believed cases occurred that were clinically alopecia areata, and subsequently proved to be ringworm. He was inclined to believe that this patient was one of those cases where some of the patches had taken on a bald character, and that if they were carefully investigated, they would show evidence of ringworm.

DR. ROBINSON said that the sharp limitation of the alopecia to the completely denuded area was in favor of ringworm, as it was the almost invariable rule that in alopecia areata there was an area of half an inch more or less at the periphery that would show some alopecia, that is, there was a thinning of the hair when comparing it with the non-affected regions. In this case he failed to find broken hairs or signs of dermatitis, but such a condition was seen in active cases of ringworm, the so-called bald form. Twenty-five years ago, when working upon alopecia areata, he had excised portions of skin from a case resembling the present one, in which a diagnosis of alopecia had been made, but it was a case of ringworm.

That case was included in his article, "The Anatomical Seat of the Fungus in Ringworm." He thought if the hairs were examined carefully in this case the trichophyton fungus would be found.

DR. KINGSBURY agreed with Dr. Robinson. The patient presented a very interesting picture, but he thought it was a typical case of ringworm.

DR. GEORGE HENRY FOX said that he had understood Dr. Robinson to say that the hairs were thinner at the margin of alopecia areata. He thought that the alopecia areata, in this case, was spreading, the hairs were loose and sparser at the margin, but where the disease had stopped spreading the hairs had fallen off and left a margin of perfectly healthy scalp with hairs not lessened in number. Years ago he treated one or two cases of ringworm where suddenly bald patches developed, and at the time he thought them cases of bald ringworm.

**Melano-Sarcoma.** Presented by DR. WHITEHOUSE.

The patient, a man forty-four years of age, was born in Russia. The condition began four years ago, as a small, black, pinhead point on the left side of the chest, near the axilla. This gradually enlarged in size and finally gave him so much trouble that ten months ago a physician advised its removal, and it was excised six months later—four months ago. This was followed by a rapid dissemination of these small melanotic spots, and larger deposits over the chest and back, and on the chin, varying from the size of a pinhead up, and jet black in color; there was also one patch on the gum. There were likewise thickened, bluish-black patches scattered over the abdomen, and a large scar where the original lesion was removed. The man had lost some flesh, and in the last few weeks had had some trouble with his stomach. It was a somewhat more diffused case than was usually seen.

**Extensive Pigmentation, Probably Nævus.** Presented by DR. HOWARD FOX.

The patient was a girl, eighteen years of age, born in Russia. She had four sisters and two brothers, none of whom showed apparently any abnormality of the skin. Her mother had suffered since birth from a similar pigmentation, limited to similar regions of the body. The patient had contracted variola as a child, but otherwise had always enjoyed good health. Since birth she had suffered from a dirty brownish pigmentation of the entire trunk, neck, and of the arms as far as the insertion of the deltoids. The face, legs and greater portion of the arms were normal in appearance. The pigmented area was smooth and showed no abnormal hairy growth whatever. The pigmentation upon the neck gave the impression of uncleanness and forced the patient to habitually wear high collars. The coloring of the hair and iris was moderately dark. She had never, according to her statement, taken any drugs and appeared to be in perfect health.

DR. ROBINSON said that in a pigmented nævus of this duration he would expect to see an hypertrophy of the hair in the affected area. He did not think that either from a clinical or histological standpoint (presence of nævus cells) was it a true nævus. It was a simple increase of pigment, as in chloasma.

DR. KLOTZ said that as the condition had existed since birth, he would consider it justified to call it a nævus..

DR. DADE said that he would hardly call it a nævus.



**Psoriasis.** Presented by DR. GEORGE HENRY FOX.

This was a case of ordinary psoriasis, but was presented to show the different results obtained from the use of pure chrysarobin ointment and one containing chrysarobin, pyrogollol and pure soap. Dr. Fox preferred the pure chrysarobin ointment, feeling that it produced sufficient stimulation. In this case the combination ointment irritated the skin and made the eruption worse, as it often did. Chrysarobin, he said, was never inert like many other medicines. If it did no good it usually would do harm, but when properly used it was about the only thing that would quickly remove the psoriasis patches.

DR. BRONSON said that the case presented a very good illustration of the virtue of testing the effect of local applications by comparing different areas in the same individual treated by different remedies. Only in that way could the superiority of one remedy over another be plainly shown. This method had long been insisted upon by Dr. Fox.

DR. KINGSBURY said that it illustrated the needlessness of using the Vienna ointment. If the scales were removed first, it was very much better to use the straight chrysarobin ointment.

DR. ROBINSON said that in his experience the chrysarobin as furnished by the druggists in New York varied much in strength and was often inert. It was therefore difficult to judge of the value of the drug under those conditions. Personally, he seldom used it in private practice, unless the lesions were limited in number, of considerable duration and not showing an active psoriatic process or the formation of many new lesions. In all the cases of active psoriasis with many lesions and a continuous formation of new ones, he thought chrysarobin often made the condition worse. He preferred alkalies with proper diet until a proper alkaline condition of the system was obtained; then he gave arsenic, and later might use chrysarobin.

DR. JACKSON said that it was extraordinary how experiences differed. He considered the Vienna ointment as a pretty good thing. He had had under observation a very severe case of psoriasis for years; for a long while nothing seemed to benefit the patient, and finally he put her on the Vienna ointment with excellent results. He had used it in a good many cases with very good effect, especially in those which required a tremendous amount of stimulation.

DR. DADE said that he had used the Vienna ointment for the very purpose of preventing a spreading dermatitis, with very good results.

DR. SHERWELL said that he always used, in all his chrysarobin ointments, a certain amount of salicylic acid and alcohol to soften it and must still believe in the efficiency of the combination. He did not believe in using salicylic acid without alcohol; this dissolved the crystals and made them smoother; and it acted better. Dr. Robinson had pointed out truly that the strength of the chrysarobin itself was very different in different stores, and that it was difficult to know what action one might obtain from its use. Some of it was almost inert, and again in very small proportions elsewhere procured, it was very active in the same individual.

DR. GEORGE HENRY FOX said that there seemed to be still a good deal of veneration for the old prescriptions. In the treatment of scabies he believed the plain sulphur ointment was as good as anything that had ever been used. Some liked to add a little tar, chalk, styrax, etc., but the sulphur ointment had never been improved upon and there was no urgent need of combining anything with



it. Chrysarobin was the only external application that he knew of that could be relied upon in the treatment of psoriasis, and it did the work, though sometimes it did harm. He believed he was the first to combine it with salicylic acid, but this combination was only of theoretical value. Chrysarobin alone removed the scales as quickly as when anything was added, and when other substances were put in they were liable to do more harm than good. He did not deny that the Vienna ointment had done good, but thought it was far better to use one good thing instead of a combination of everything that was reported to have a good effect on the disease. It was true that chrysarobin did vary in the different stores and the drug sold at present was by no means as active as that formerly in the market. In the average cases of psoriasis, chrysarobin had as brilliant an effect as mercury in syphilis, and he would be sorry to have to treat psoriasis without it.

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## NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Stated Meeting, held March 1, 1910.

DR. SIGMUND POLLITZER, *Chairman*.

**Favus.** Presented by DR. MACKEE.

The patient, a little girl, seven years of age, was from Dr. Fordyce's clinic. According to the history the disease developed four months ago and had been contracted from a pet house-cat.

When presented, there were eight scattered lesions on the scalp, each lesion consisting of an elevated mass of bright-yellow crusts. These crusts, when removed, left a moist surface, but the follicles did not appear to be affected, excepting in one instance, where a poorly defined cup was present. There was no alopecia and the hair was neither brittle nor lustreless. A microscopical examination had not as yet been made. The case was probably one of beginning favus, but Dr. MacKee did not feel that he could make a positive diagnosis on the clinical symptoms alone. The result of the microscopical examination would be presented at the next meeting of the Section. The patient was to be treated by the X-ray.\*

**Lichen Planus Universalis (Two Cases).** Presented by DR. LAPOWSKI.

These two women, with generalized lichen planus, were presented for the sake of comparison with the next case that the speaker would show and to demonstrate the great difficulty of distinguishing a primary papule of lichen planus from a primary papule of the so-called lichen syphiliticus.

**Lichen Syphiliticus.** Presented by DR. LAPOWSKI.

The patient was a woman twenty-one years of age, with a maculo-

\* Microscopical examination confirmed the diagnosis of favus.

popular eruption on the trunk and lichen syphiliticus on both sides of the neck and in both axillæ. The case was of three weeks' duration.

DR. HOWARD FOX agreed with the diagnosis in each case, but objected to the term lichen syphiliticus, as such a case was not true lichen at all.

DR. POLLITZER agreed that some of the lesions on the neck bore a considerable resemblance to lichen planus, but said that for the most part they lacked the sharp polygonal outline of the latter. The lesions in the axillæ were interesting, as from them alone a diagnosis could not be made.

DR. LAPOWSKI, closing the discussion, called attention to the difference between the axillary lesions of the two diseases. In lichen planus the papules were all dry, and some even scaly, whereas in syphilis they were all moist and shiny.

#### Case for Diagnosis. Presented by DR. LAPOWSKI.

The patient was a woman, thirty-five years old. There was no family history of tuberculosis. When fifteen years old she was operated on for a glandular (?) enlargement of the right side of the neck. The resulting scar was still visible. The present lesion on the lower lip was of ten years' duration. Up to the present time, the condition of the lip had not been annoying to her, but lately it had become painful, especially when the lip was moved. The corners of the mouth were normal. The mucous surface of the middle portion of the lip was red, surrounded by a thin border of the color of mother-of-pearl, which sharply separated the affected parts from the healthy surfaces. The border was uneven and scerpiginous. The enclosed red surface was dotted with pinhead-sized droplets of mucus, which appeared in larger amount when the lip was squeezed between two fingers. Inside the border there was one spot which, microscopically, seemed to be of normal color and appearance. There were no scales, no scarring, and no tubercles. Some of the points bled when the lip was pressed or stretched. The lip was not increased in size and there was no infiltration; the submaxillary glands were slightly enlarged, but painless.

DR. ROBINSON said that on account of the elevated, firm, epithelial character of the margin and the eroded, easily bleeding base, he would make a diagnosis of epithelioma and not of lupus erythematosus. The latter disease should show also some scarring and atrophy. He advised treatment by proper caustics, such as acid nitrate of mercury, or caustic potash, applied long enough to produce necrosis of the pathological tissue. If used in this way there would be healing without a scar.

DR. HOWARD FOX said that he had seen cases of lupus erythematosus so closely resembling this, that he believed this disease could not here be excluded on appearance alone.

DR. POLLITZER said that this was a case of superficial epithelioma; if it were lupus erythematosus it would not have quite so sharply defined a border, the whole surface would look more leathery and would not bleed so readily.

DR. LAPOWSKI said that when he first saw this patient, and heard her history of an operation for enlarged glands, he thought at once of lupus erythematosus.

But the lack of atrophy, and the bleeding from spots scattered over the surface instead of from fissures, caused him to change his diagnosis to epithelioma.

**Case for Diagnosis.** Presented by DR. HOWARD FOX.

The patient had been shown previously before the New York Dermatological Society in October, 1909, and January 24, 1910 (*Jour. Cutan. Dis.*, June, 1910, xxviii, p. 290).

DR. LAPOWSKI said that he thought this was a case of the sarcoid of Boeck, a tuberculide, and he advised a test with tuberculin.

DR. MACKEE said that this case had many points of resemblance to the case of possible lupus erythematosus that he had presented at the December, 1909, meeting of the Section. There was the same tumefaction, the same telangiectasis, the deep induration or hard œdema, the violaceous color and the same atrophy without ulceration. He was, therefore, inclined to believe this case to be one of lupus erythematosus nodularis as described by Crocker. He could not explain the presence of the yellowish pigmentation on the cheeks.

DR. WILLIAMS agreed with Dr. Lapowski that this was a case of the sarcoid of Boeck.

DR. POLLITZER said that he did not believe this was sarcoid. That disease was characterized by flat, sharply defined, yellowish or bluish red discs; whereas in this case the lesions were distinctly rounded and nodular. The practical limitation of the lesions to the face, together with their great number, were also against sarcoid. He would hesitate to make a diagnosis without further observation, but the most probable explanation seemed to him that the disease was a chronic inflammation of the sebaceous glands, probably of toxic origin; in other words, an atypical acne indurata.

DR. HOWARD FOX said that he was pleased that the members of the Section agreed with him that syphilis could be excluded on the clinical appearance. At the last meeting of the New York Dermatological Society, the trend of opinion had been toward a diagnosis of tuberculide. He himself would not venture an opinion, but promised to have a biopsy made, which should settle the question.

**Dermatitis Herpetiformis Bullosa.** Presented by DR. HOWARD FOX.

The patient was shown before the New York Dermatological Society, February 28, 1910 (*Jour. Cutan. Dis.*, Aug., 1910, xxviii, p. 402).

DR. LAPOWSKI objected to calling any case dermatitis herpetiformis until the diagnosis was established by a relapse, which had not yet been observed in this case.

DR. HOWARD FOX remarked that any recurrent disease had to begin with a first attack, and that this case resembled a first attack of dermatitis herpetiformis more than it did any other disease with which he was acquainted.

**Parakeratosis Scutularis.** Presented by DR. OULMANN for DR. WEISS.

This patient was presented before the Section on December 7, 1909, with a diagnosis of psoriasis rupioides (*Jour. Cutan. Dis.*, June, 1910, xxviii, p. 296).

DR. LAPOWSKI preferred the original diagnosis of psoriasis rupioides, to which this case corresponded in everything except location. He had had a

patient with an exactly similar eruption, on the anterior surface of the thorax who two months later developed typical psoriasis, and which disappeared entirely under the use of chrysarobin.

DR. MACKEE referred to the discussion of the case at the December, 1909, meeting of the Section. At that time he had called attention to the fact that the primary lesion consisted of a minute papule covered with micaceous scales. The older lesions had been carefully preserved, the crusts were yellow, dry and shiny, and could be removed "en masse," leaving a moist surface like one would see in lesions on the border-line between psoriasis and eczema seborrhœicum. There were also several lesions on the knees and elbows. He still felt that this was a case of psoriasis.

DR. POLLITZER said that this case was not like psoriasis in the location, the many years duration without change, the character of the scaling, and the shape of the lesions. On the other hand, it seemed to conform exactly to Unna's description of parakeratosis scutularis.

#### Epithelioma of the Forearm. Presented by DR. LAPOWSKI.

The patient was a man about thirty-five years old. The present lesion, on the extensor surface of the right forearm near the wrist, started twelve years ago, after a burn. The affected surface was quadrangular in shape,  $3\frac{1}{2}$  inches in length, and 2 inches in breadth, surrounded by a distinct mother-of-pearl-colored border. The skin was thin and red, the redness disappearing under pressure, but quickly reappearing when the pressure was removed. Upon the surface of the red spot, several weeks ago, before exposure to the X-ray, there were pinhead-sized, superficial ulcerations with oozing, red bases. At that time, on stretching the skin, small droplets of serum appeared at various points where, macroscopically, no abrasions could be seen. Under X-ray treatment, the raised border, the ulcerations, and the oozing all disappeared, leaving a red, dry, not infiltrated surface, covered with very thin scales, with a thin but sharply defined border. Neither the cubital nor the axillary glands were perceptible.

DR. HOWARD FOX said that he had seen the case on one occasion at the Skin and Cancer Hospital, before treatment was begun. At that time there was a slightly raised waxy border, with a wavy outline. At the present time the border was not visible and a diagnosis could not be made, except by the microscope.

DR. ROBINSON said that a diagnosis was impossible from the condition of the parts when the case was presented.

#### Annular Syphilide. Presented by DR. KINGSBURY.

The patient was seventeen years of age; born in this country, but of Swedish parentage. He was a decided blond, well developed, and apparently in good general health. The eruption was confined to the face and consisted of about a dozen ringed lesions; They were from three-eighths of an inch to one inch in diameter. There was general adenopathy and

characteristic ulcerations in the throat. For over a month the hearing in the left ear had been considerably impaired. There was no history of chancre or of early secondaries and careful examination failed to reveal the site of the former.

**Dermatitis Herpetiformis.** Presented by DR. OULMANN.

The patient was thirty-eight years old, a dentist, and was first seen by the speaker fifteen months ago, at which time the case was presented to the Manhattan Dermatological Society. At that time the diagnosis of most of the members was seborrhœal eczema, while a spot on the nose, by some of the members, was taken for lupus erythematosus. The lesions on the back and chest appeared 2½ years ago; later the head and then the face were affected. He was treated by at least five dermatologists, who treated him either for seborrhœal eczema, syphilis or lupus. Dr. Oulmann first started to treat the case ten months ago. At that time his chest as well as his head were covered with crusts from the size of a lentil to that of a dollar. In and below the axillæ were two longitudinal crusted lesions and in the pubic region there was also a small crust. There was a small lesion of similar character just above the outer canthus of the right eye. Arsenic and various tonics and sulphur and the X-ray locally were employed but without benefit. The use of chrysarobin and a vacation in the country produced some relief. Occasionally and especially on the face, red lesions appeared which were covered with crusts, which, upon removal, would reveal a moist base. Pruritus was not marked although present to some degree. Finally, new lesions developed on the face, abdomen and thighs. All these new lesions were vesicles and bullæ. The speaker had, during the treatment, thought of various possible diagnoses such as parapsoriasis and also Duhring's disease, but when he saw the blebs develop, he made the diagnosis of pemphigus, as there was neither grouping nor itching and because the healing process and the formation of the horny layers were so slow and incomplete.

DR. ROBINSON said that the diagnosis lay between pemphigus and dermatitis herpetiformis, the location on the scalp favoring the former, and the appearance of the body lesions, the latter.

CHARLES M. WILLIAMS, M.D., *Secretary.*



## MANHATTAN DERMATOLOGICAL SOCIETY.

October, November, December, 1909.

CHARLES A. KINCH, M.D., *President*.**Scrofuloderma and Heredo-Syphilis.** Presented by DR. GOTTHEIL.

Annie L., seven years old, was the eldest child, born in the second year of her mother's marriage, with no antecedent history of miscarriage, or any disease in either parent; there had been two other children since then, who were healthy. She never had had any eruption, but suffered from "snuffles" when one month old, which was cured without medicine by the local use of salt and water. She had always been sickly; she was over one year old before the first incisor tooth appeared; one year ago she had "sore eyes," which the dispensary doctor said was of hereditary nature, and which was cured with a "salty medicine" that the child took in ten-drop doses. Soon after that the nodules on the side of her face appeared, and travelled slowly around under her chin. A few weeks ago she began to have trouble in the left side of her nose and in the adjacent cheek.

She was brought to the Lebanon Hospital Dispensary on February 25th, when she was examined by Dr. Heller in the Nose and Throat Class. He reported that he found the lower and middle turbinates on the left side absent; the nasal cavity was full of pus; a loose sequestrum, probably a part of the inferior turbinate, was removed with the forceps; the nasal bone was affected and exposed; the bridge was sunken; and by probing he detected that the entire antrum on that side was occupied by a fairly soft but not fluid mass, which had protruded and deformed the cheek on that side, and which he took to be gummatous. The soft palate was deformed and perforated by a process evidently older in date than that in the nose.

Examination, Feb. 27, 1910. The child was fairly well developed for her age, and showed no marks or scars upon the body. The bridge of the nose was badly sunken; there was an abundant purulent discharge from the swollen left nostril, and the left malar region was distinctly enlarged. The throat showed the malformation already referred to. In front of the left ear was a large stellate scar, adherent to the maxillary bone, and covered in its centre by a heaped up crust, removal of which showed a granulating mass below, but no sinus. From this point there extended under the chin to about its junction with the neck, a narrow but almost continuous bridle of scar tissue of typical tuberculous appearance and with the characteristic fleshy tabs. Near the right ear was a similar, but smaller scar with a central scab; and back of

that, on the side of the nape of the neck, was a more recent scabbed lesion, which, the mother said, marked the site of the last abscess. The history and appearance of these lesions were precisely that of tuberculous gland infection, with final involvement of the skin. The entire submental region traversed by the bridle-like scar, was occupied by a dense, hard mass that filled the floor of the mouth, evidently composed of the fused submental and sublingual glands.

There were no traces of an old keratitis; the hearing was normal; the condition of the upper permanent incisors could not be ascertained, since they were knocked out by accident soon after they appeared.

The case was presented as one of heredo-syphilitic ulceration and perforation of the soft palate, caries of the nasal bones, and gumma of the antrum; together with tuberculosis of the glands of the neck and skin, and chronic tuberculous inflammation of the glands in the floor of the mouth. There had not been time as yet to have a radiograph taken, or the tuberculin and Wassermann tests made.

#### **Lupus Vulgaris.** Presented by DR. MACKEE.

The patient was a female, thirty years of age, born in Ireland; a domestic. She first came under observation at Dr. Fordyce's clinic a year ago, at which time she presented a flat, scaly, atrophic patch on the extensor surface of the left forearm which was 3 inches long and 1½ inches wide. It was of a violaceous color and studded with large apple-jelly nodules. The lesion was treated with strong applications of the solid carbon dioxide. The ulceration following the applications was surprisingly great and healing was exceedingly slow, requiring nearly four months. The temporary result was excellent, but the nodules, however, returned in the scar within a very few weeks. When the case was presented to the Society, the disease was almost as bad as when the patient first came under observation.

#### **Lichen Planus and Dermatitis Herpetiformis.** Presented by DR. COCKS.

L. B., eleven years of age and born in Italy, entered the Fordham Hospital in January, 1902, complaining of a general pruritus. Examination at that time showed numerous scratch marks all over the body. On the elbows, inner sides of the thighs, and abdomen, were areas varying in size, some one by two inches, others three by four inches, consisting of closely aggregated angular papules. These were slightly raised, of a waxy color, and depressed at the centres. Following the lines of experimental scratches, rows of similar papules developed. Treatment consisted of mercury internally and sedative ointments externally, as a result of which the eruption disappeared.

During the Christmas week of 1909, the patient again presented himself. He was almost free of his lichen planus; only a few papules were to be seen at the periphery of the original area. Limited to the site of the former eruption were a few vesicles and papules grouped in areas about the size of a twenty-five cent piece. These papules were slightly raised; they were not concave and bore no relation to the hair follicles. The patient claimed that the pruritus was more severe than that previously experienced.

Dr. Cocks did not believe that there was any connection between the lichen planus and the dermatitis herpetiformis, but presented the case as a rare combination.

**Lichen Planus Corneus.** Presented by DR. DITTRICH.

J. R., carpenter, married. Two years ago his affection began with the appearance of small, reddish papules and severe itching. He was treated at the Lebanon Hospital Dispensary with salves. When presented, he had on both legs, elevated lesions which were very hard; some the size of a split pea, others that of a silver quarter. They were violaceous in color and had a rough scaly surface, which on some of the lesions was of a horny consistency.

Characteristic lichen planus lesions had been observed, though none were visible when the case was shown to the Society. The lingual mucosa showed typical lichen planus lesions.

**Erythema Multiforme Gestationis.** Presented by DR. GOTTHEIL.

Mrs. M. P., thirty-three years of age, was admitted to the Lebanon Hospital on November 29, 1909. She was now suffering from her fourth attack of a general dermatosis occurring during pregnancy and lasting through the puerperium and beyond it. In three of these attacks she had been under Dr. Gottheil's care.

First attack. On December 3, 1901, being then twenty-five years old, married one year, and pregnant eight months, she was brought to the speaker's office by Dr. Berow. For three months there had been itchy papules around the nipples and umbilicus, and three weeks previously these had begun to spread over the entire body. The pruritus was intense, preventing sleep, yet her general condition was not bad, and there were no constitutional symptoms. Most of the body, with the exception of the face, palms and soles, showed the skin reddened, thickened, and covered with many scratched papules and excoriations; this condition was most marked on the anterior abdomen, and was evidently the eczematous early eruption. The eruption which next appeared was entirely different, being a typical erythema multiforme; it was most marked on the anterior forearms and thighs, and the lower

abdomen. It varied from pea-sized papules to dollar-sized, beautiful iris patches. The patient was not seen again until October 29, 1905. She stated that the eruption of 1901 disappeared four or five weeks after it had been seen by the speaker. The baby died at the age of six weeks, with a skin eruption which the mother affirmed was exactly the same as her own.

Second attack. This time the eczematous eruption and the erythema multiforme occurred separately; the speaker did not see the patient but had only her history. In the second month of her second pregnancy, in 1902, the itchy, general, papular eruption appeared again, but got well under treatment in four weeks. On the morning after her 1902 confinement there suddenly appeared a general eruption of vesicles, just like the 1901 eruption; this disappeared in six weeks. The baby of that confinement was still living.

Third attack. The confinement occurred on September 29, 1905. The child survived and was still in perfect health. In the tenth week of her pregnancy there occurred a very severe eruption of vesicles and bullæ over the whole body, which lasted for several weeks.

Fourth attack. On December 2, 1909, the patient was again seen in the Lebanon Hospital. She had not been pregnant in four years, and her skin had been free of disease all that time. She became pregnant about the beginning of August, 1909; three weeks later an eruption looking like measles, and itching intensely, appeared. An abortion occurred on October 17th. Nevertheless the eruption persisted, and in the latter part of October there appeared large vesicles which rapidly increased numerically. When presented to the Society she had a very extensive bullous eruption of the arms and hands, some of the blebs being several inches in size, interspersed with papules, blood crusts and excoriations. On the abdomen and thighs were large typical areas of erythema, with purplish and paling centres and vivid pink and papular advancing margins. Some of the smaller erythematous lesions had central vesicles and were distinctly iris in form. The general health appeared to be good, all the excretions were normal, and there had been no elevation of the temperature.

**Lupus Vulgaris.** Presented by DR. MACKEE.

The patient was a girl, twenty years of age, who had presented herself at Dr. Fordyce's clinic four years previously for the relief of a scrofuloderma of the neck and a lupus vulgaris of the face and ears. She had had enlarged cervical glands ever since she was three years of age, but they did not ulcerate until she was fourteen and the cutaneous tuberculosis of the face and ears developed two years later. When she first came under observation at the dispensary there was considerable

scarring of the neck on both sides, directly under the inferior maxilla, with considerable inflammation and infiltration of the skin and three sinuses from which there was a purulent discharge. Both cheeks, near the angles of the inferior maxilla, were the sites of flat, violaceous lesions, exhibiting considerable atrophy and many apple-jelly nodules. The lobes of both ears were ulcerated and covered with honeycomb crusts. The tuberculous glands and the scrofuloderma yielded rapidly to X-radiation, as also did the ulcerative lesions of the ears. The X-ray, however, did not prove efficacious in the treatment of the condition of the cheeks. The high frequency current (fulguration) was then applied to the individual nodules, and they were by that means destroyed.

When presented to the Society, the patient exhibited a return of the ulceration of the left ear. The lobe of the left ear was atrophic, but no nodules could be seen, nor was there any evidence of activity. There were a few nodules in the cheeks which, Dr. MacKee said, were of recent development. The neck was scarred but there was no evidence of active disease in this location.

**Atrophia Cutis Maculosa of an Unusual Type. Presented by DR. GOTTHEIL.**

Miss R. M., twenty-two years of age, was referred to the exhibitor on November 15, 1909. Some three years ago she accidentally discovered the presence of a white spot on the nape of her neck; this had increased in size to some extent, and others had appeared lower down on her back. There had been no subjective sensations; and the patient sought relief only because she could not wear décolleté dress.

Examination. The skin of the nape of the neck and back, from the level of the lower cervical vertebræ to the waist line, was divided into at least six distinct groups. Three of these had more extensive and more marked lesions than the others, and were evidently the oldest; the patient was herself unaware of the existence of the other and newer groups. In the centre of each one of the three older groups was an irregular lesion of varying size in which the atrophic process was much more marked, and evidently much further advanced, than in the numerous surrounding ones.

Primary lesions. There were three of these; the oldest and most marked being seated at the base of the nape of the neck. Over an irregular and not sharply defined area, about 3 by 4 cm. in size and with several outlying islets of similar tissue, the skin was markedly thinned, crinkled like cigarette paper, and of a dead-ivory-white color that contrasted markedly with the patient's normally brown and well-pigmented brunette skin. Lower down between the shoulder blades was another similar atrophic area half a centimetre square. Still lower down, below the ala of the left scapula, was the largest area of all; it was irregular,



and 5 by 6 cm. in size; and around it were a number of very small scattered foci, many of them striate or thread-like in form.

Secondary foci. These were present in great numbers; either grouped around the primary foci or appearing as independent and isolated groups. The lesions were shallow, oval depressions, with their long axes running parallel to the cleavage lines of the skin, and varying in size from a minute, hardly visible, shallow crater to distinct and regular, oval depressions, a centimetre long by half a centimetre in breadth. Their color was that of normal skin; the largest lesions were, perhaps, a little hyperpigmented. They were most numerous and most closely aggregated around the primary foci; but there were several collections of them in various places, notably at the right infrascapular region near the waist line, on the left side of the waist toward the axillary line, and to the right of the middle primary lesion and its surrounding atrophic

Dr. Gottheil regarded the process as a degenerative one, and probably of much longer standing than the patient was aware. The shallow depressions which for convenience had been designated as secondary lesions, in all probability constituted the origin of the atrophic process. It seemed probable that every one of the earlier lesions would terminate in complete atrophy like that of the primary foci. It remained to be added that though, from the distribution of the atrophies, some neurological basis for the process might be suspected, there was no anæsthesia or hyperæsthesia in the patches; there were no skin changes anywhere else on the patient's body, and she had had no previous sickness of any note; and her general health was perfect.

#### **Prurigo.** Presented by DR. MACKEE.

The patient was a boy eight years of age. He had first come under observation at Dr. Fordyce's clinic two years previously. The mother stated that the disease had developed when he was two years of age, starting as pruritic papules on the forearms and legs which soon became generalized in distribution. Dr. MacKee stated that he had observed the child carefully for a period of two years and had noted a marked improvement beginning about April of each year and lasting until mid-winter. The urine contained an enormous amount of indican which had been impossible to overcome. Local and general medication had never given more than temporary relief.

When presented, discrete, but numerous pinhead to pea-sized papules were present on the extremities, both flexor and extensor surfaces, on the face, the trunk, and a few on the scalp. The lesions of recent development were practically colorless, but the older ones were of a dull-red color, many of which were capped with a scale, an excoriation or a blood crust. They were all hard and deep seated. Here and there over

the body could be seen an urticarial wheal. The boy was rather poorly developed, anæmic and had a very large tympanitic abdomen. The skin was much thickened in all the affected areas.

**Dermatitis Herpetiformis.** Presented by DR. MACKEE.

This patient, a man of forty-eight years, was from Dr. Fordyce's clinic and had been under observation for three years. His disease had begun five years previous to his first visit to the dispensary. Since the beginning the patient had never been free from lesions and the attacks which were very severe, occurred every few months. Each attack consisted of the usual formation of grouped vesicles with many bullous lesions which would occasionally attain the size of a silver dollar. The parts affected were the extensor surfaces of the extremities, the genitals and inner surfaces of the thighs, the lower abdomen, upper part of the back and the face and scalp. The patient was exceedingly anæmic and the urine contained an enormous amount of indican. It had been impossible to do more than reduce the amount of indican, which was accomplished by a combination of intestinal lavage and the ingestion of two quarts of fermented milk every day. A fairly strict vegetarian diet was also adhered to. Under this régime the patient appeared to be slowly improving, inasmuch as the attacks were less frequent and less severe in character.

**Dermatitis Herpetiformis, Called "Dhobie Itch."** Presented by DR. GOTTHEIL.

R. W., forty-three years of age, English. The patient entered the City Hospital on September 1, 1909. He had been home eight weeks from Panama, where he resided for eleven months, and where his present trouble developed. He stated that he had been in a Panama Hospital on two occasions on account of recurrent attacks of the disease. The last outbreak developed just before he left the Isthmus, and it was the worst of all the attacks. The affection was called "dhobie itch," and the patient claimed that there were many cases of it. All the attacks had been marked by the most intense and persistent itching, together with the appearance of multitudes of vesicles.

Examination. The eruption was most marked on the extensor surfaces of the arms and legs, the trunk being comparatively free of recent lesions, though showing the stains and marks of preceding ones. The arms were covered with lesions markedly grouped, and in various stages of development. Beginning as a minute perifollicular infiltration, they soon became vesiculo-pustular and then developed into moderate-sized bullæ. Many of these groups had been scratched open, and some of them infected. On the outer surface of the thigh were similar groups of lesions, though less numerous than on the arms; and on various locations

on the shoulders, back, and abdomen were smaller groups. The genitals, hands, wrists, axillæ, etc., were free. Pruritus was intense, as was shown by the extensive excoriations and local infections; and the patient was in bad condition from the great loss of sleep occasioned by his condition. During the month that he had been in the City Hospital, treatment had been confined to local sedative and antiseptic solutions and general hygienic measures. The lesions had gradually retrogressed, and few new ones had appeared. When presented to the Society, there were a few new and characteristic groups of papulo-vesicles on the shoulders; the local infections had disappeared. It was stated that the patient slept better, and that his general condition was very much improved.

The speaker said that most of the cases of the so-called "dhobie itch" that had been reported from the South and West had seemed to be aggravated cases of scabies, possibly due, in some instances, to infection with a parasite derived from animals. This case showed that other pruriginous affections had been included under this popular and undesirable designation.

#### **Extensive Leucoderma in a Colored Man. Presented by DR. OCHS.**

The patient, J. S., was twenty-eight years of age. About four years ago he noticed a white spot on the left side of his neck. This remained stationary for about six months and then gradually spread in both directions around the neck and increased in breadth. At the same time other white plaques appeared on other parts of the body; first on the hands, then at the angles of the jaw and soles of the feet and lastly on the trunk.

When the case was presented there was a complete ring around his neck, around his eyes, and entirely surrounding his mouth. The top of his nose was entirely white. The glans penis was likewise affected. One-half of his body was black and the other half white. There was no luetic history. No neurological affection was discernible. There was no evidence of anæsthesia in any of the leucodermic areas.

The speaker, in order to keep the patient for demonstration and to impress him with the fact that something was being done for him, painted the white areas with a solution of tincture of nux vomica; six times in all. The pigment had returned in all the areas painted with the solution.

#### **Epithelioma Involving the Entire Right Side of the Malar Region; Markedly Improved by Applications of Solid Carbon Dioxide. Presented by DR. PISKO.**

Mrs. M., eighty-one years old. The duration of the present condition was five years. It started as a small papule on the side of the nose,

which repeatedly ulcerated and healed spontaneously. She had received thirty-one X-ray treatments, which did not prove of permanent benefit.

When first seen by the speaker, the lower lid and entire infraorbital and malar regions were the seat of a tremendous ulceration, exposing the bony structure at its base. Solid carbon dioxide was applied five times in the following manner: The cavity of the ulcerated mass was firmly packed with small pieces of the snow and allowed to remain until it all disappeared; about five minutes in all. The margins were treated in the usual manner. The reaction was very vigorous; but improvement was noticeable after the first application. When presented, the bony structure was covered over with healthy granulation tissue; the infiltrated margins had disappeared, and the entire appearance was that of a healthy granulating wound.

**Argyria.** Presented by DR. GOTTHEIL.

James M., thirty-four years of age, was admitted to the City Hospital, for trachoma on June 4, 1909. The patient contracted syphilis fifteen years ago, which was followed by irregular treatment. He still had the scars of the old ulcerative lesions on the face, neck, trunk, and limbs. The eyelids and nares were deformed; the columela and cartilaginous septum nasi were destroyed; the soft palate and pharynx were deformed and cicatricial; the tongue was thickened and indurated, with epithelium irregularly hypertrophic, lingua geographica; trachoma; diffuse opacity of the right cornea; right iris smaller than left, but movable; chronic laryngitis. The general health and nutrition were good.

The entire skin, with the exception of the palms and soles and genitals, and all the visible mucosæ, were stained to a more or less deep steel-gray color. This was most marked on the face and neck, where the color was distinctly steel-gray. The scar tissue marking the old ulceration sites was hard, stained at all, and the circular and oval cicatrices were prominently white. The skin of the trunk and limbs was ash-gray in color, and here also, the cicatricial areas were unpigmented. The backs of the hands were dark gray, but the palms, though showing old cicatrices, were practically normal in color. The sclera were distinctively blue-gray. The entire palatal vault and the fauces were steel-gray in color; and the swollen tongue was grayish-pink where the hypertrophic epithelium permitted its tissue to be seen.

The history explained the dermal condition. Some ten years ago, during the earlier stages of his luetic infection, the patient suffered from persistent ulcerative throat trouble, of which the cicatricial changes in the tongue, palate, and fauces were evidences. For seven years or more he was in the habit of using a ten to fifteen per cent. silver nitrate solution freely in his throat, often using it three times a day for weeks at a time. Undoubtedly large amounts of the drug were gradually swallowed.

Two years ago he noticed the gradual darkening of the skin of his face. He believed that this had been gradually getting lighter during the last year; but this was not apparent to the physicians who had had him under more or less continuous observation for six months past.

**Epithelioma of the Nostril.** Presented by DR. PISKO.

The patient exhibited by Dr. Pisko, was a male of American birth, and fifty-four years of age. The present condition dated back six months; at that time he noticed, at the angle of the left nostril, a small, hard, crusted papule.

On examination, at the time of presentation, he showed a small, circular, eroded area, about one-quarter of an inch in diameter, with edges slightly elevated, pearly, and hard to the touch. Dr. Pisko said that the solid carbon dioxide would be employed to destroy the growth and the case presented at some future meeting.

**Seborrhœa Psoriasiformis.** Presented by DR. OCHS.

E. B., seven years of age. The patient was first seen by the speaker in February of last year. The condition since then had not changed very much.

An examination showed an eruption, very widely spread, and inflammatory in character. It covered the scalp, forehead, post-auricular regions, back of the neck, the whole of the back, stopping at the centre of the buttocks, the arms and legs, and the abdomen. The eruption consisted of reddish, slightly scaling areas, with raised, sharply defined borders, and polycyclic in some locations, as on the abdomen and legs. On the left upper arm, forearm, and the centre of the calf of the right leg, were isolated, round patches of the same character as the general eruption. Over both shoulders, as well as the centre of the back and lower parts of the buttocks, were bands of healthy skin. The scaling was most pronounced on the scalp, forehead, and post-auricular regions. The hair was dry and scanty.

It was interesting to note that the naso-labial folds, as well as the cheeks and eyelids, were free.

**Erythema Nodosum.** Presented by DR. PISKO.

Rose A., fourteen years of age. The patient had had rheumatic symptoms since her fifth year. The present illness began with a sudden onset about two weeks ago; pain in the joints and a marked swelling and erythema about the ankles. The discoloration at first was a bright red, later bluish and finally became greenish.

When presented, the patient exhibited on the anterior aspects of her legs, areas of dark erythema, about the size of a man's hand, with distinct, painful, nodular centres.



**Dermatitis Medicamentosa; Exanthem of the Erythema Multiforme Type,  
due to Mercury. Presented by DR. GOTTHEIL.**

Miss A. R., twenty-two years of age, was admitted to the City Hospital on September 30, 1909. Earlier in the month she had suffered greatly from headache, for which she had been treated at Bellevue. When admitted to the City Hospital, she exhibited a general papulo-tubercular syphiloderm. The first intramuscular injection of mercury salicylate was given on October 2nd. On the next day there appeared a general eruption composed of small, grouped, acuminate, papulo-vesicles on the trunk and limbs; this grew until the integument was fairly covered with lesions, which under the breasts and between the legs became confluent, forming larger eczematous areas. The papules were acuminate and bright red; there was considerable itching and burning.

On October 11th, the eruption had practically disappeared and the syphilitic exanthem was fading. Another injection was given, which was followed on the 13th by a similar but milder general eczematous outbreak which soon subsided.

On November 12th, the patient being entirely recovered, so far as the mercurial exanthem was concerned, the cephalalgia having returned and the papular eruption being still present, another attempt was made to administer mercury in the same way. On November 15th, there was a renewed and much more violent outbreak of the general exanthem, which persisted during the rest of the month. Its type, however, changed into that of a typical erythema multiforme. There was a continuous temperature ranging from 100° F. in the morning to 102° F. in the evening; the urine was scanty; sp. gr. 1030 to 1040, with traces of albumin and hyaline and granular casts. She was put on a salt free diet and the regular treatment for nephritis.

In the meantime the papular eczematous eruption had spread over the entire body and become confluent. The face became inflamed, œdematous and swollen, and on the upper part of the body there was an acute general eczema. On the forearms, hands and palms a bullous eruption appeared, some of the blebs being as large as a pigeon's egg. On the thighs and legs the eruption was that of a typical erythema multiforme; large purplish spreading patches with fading centres, and many distinct iris lesions. When last seen, on November 29, 1909, the general eczematous eruption was fading, the erythematous patches were not spreading, the temperature was nearing normal, and the acute nephritis was getting better.

REVIEW  
of  
DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MACKEE, M.D.

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SYPHILIS OF THE SKIN AND MUCOUS MEMBRANES,  
ATROPHIES, HYPERTROPHIES, BENIGN AND  
MALIGNANT NEW GROWTHS.

By UDO J. WILE, M.D., New York.

**Nævus Anæmicus.** R. STEIN. *Arch. f. Dermat. u. Syph.*, 1910, ci, Nos. 2 and 3, pg. 411.

Stein details the results of experiments performed by himself on three cases of the so-called "nævus anæmicus" described first by Vörner. The clinical picture in all cases is as follows: The lesions are more or less sharply demarcated, irregular spots, which attract the attention only by their pale color. The situation of the lesions may be anywhere on the body; they are usually multiple, and vary greatly in form and size. Two of the cases described by the writer, were associated with ordinary telangiectatic nævi. The condition is most probably a congenital one and gives rise to no subjective symptoms, and the lesions once present, do not seem to increase in size or number.

The experiments were directed with the idea of studying the effects of mechanical and chemical irritants on these lesions as compared to the reaction of the same irritants on the normal skin. Heat, cold, pressure, suction, friction, cantharides and solid carbon dioxide were the various agents employed to produce irritative phenomena. In general the lesions reacted to these stimuli much the same as did the normal skin, save that the consequent erythema, wheal or bulla, appeared somewhat more slowly, was less uniform, and disappeared more quickly, in the former than in the latter. The results of his experiments the author sums up as follows: The "nævi anæmici" are most probably congenital lesions arising through a striking lack of vascularity in the skin. These lesions show a hyperæmic reaction to all kinds of external stimuli in a slight degree only, and this reaction disappears with striking rapidity, whereas urticarial and inflammatory reactions when produced in these lesions, behave as in normal skin.

Concerning Syphilis d'Emblée. BETTMANN. *Arch. f. Dermat. u. Syph.*, 1910, c, Nos. 1 and 3, pg. 145.

Bettmann analyzes all the cases in the literature reported as instances of syphilis developing without an initial lesion. In practically all these cases the possibility of error in the search for the primary lesion is so great that the acceptance of any given case as one of "syphilis d'emblée" must be taken only after the most searching inquiry and investigation. The writer's observations concern two cases in which an infection without the development of a chancre seemed most probable. In one case, a physician while injecting a patient suffering with oral mucous patches, stuck his finger with the needle which had broken off. The wound was carefully dressed, and healed promptly. Nineteen days after, he became quite ill with symptoms of fever and swelling of the cervical lymph glands, and on the twenty-third day, typical secondaries developed. A previous infection could be definitely ruled out.

The second case was that of a student who, thirty-six hours after coitus with a known syphilitic woman (previous coitus one half year before), had himself circumcized on account of a small fissure on the foreskin. The wound healed by primary union, but six weeks thereafter a characteristic eruption appeared without any glandular enlargement and the most careful search failed to reveal a possible extragenital infection.

Until it can be definitely established that in such cases one is not dealing with perhaps a microscopic chancre, or possibly that the spirochætæ have been carried by the blood stream to some distant part of the body and there have developed a chancre, these cases must be regarded as examples of "syphilis d'emblée."

Osteochondroma of the Skin. W. CARL. *Arch. f. Dermat. u. Syph.*, 1910, c, Nos. 1 and 3, pg. 183.

The very scant literature concerning bony tumors of the skin is cited by the author, who then enriches the number of cases by a report of one of true osteochondroma of the skin observed by himself. The patient, a man of twenty-two years, had had the tumor, at least to a noticeable degree, since his second year. The location of the growth was at the side of the neck under the left ear. The tumor was freely movable upon the overlying skin, which itself showed no change. There was slight tenderness upon palpation. That the tumor was bony, was revealed by the X-ray, which also showed, however, that there was absolutely no connection between the new growth and the neighboring skeletal parts. The tumor was excised and the microscopic picture showed the formation of true bone and cartilage underneath the epidermis and extending well down to the deeper layers of the cutis. There was absolutely no inflammatory

reaction to be seen. No connection between the tumor and the parotid or between the former and any of the neighboring bony or muscular structures could be made out, and in discussing the possible origin of such a growth, the writer concludes that its origin from misplaced embryonal bony tissue offers the most likely explanation.

**The Cutaneous Horn.** MAX JOSEPH. *Arch. f. Dermat. u. Syph.*, 1910, c, Nos. 2 and 3, pg. 343.

Joseph, writing in the *Caspary Festschrift*, describes in great detail the theories concerning the formation of cutaneous horns, and two cases observed by himself are added to the literature. The subject is presented in a most interesting fashion but contains nothing new with regard to the pathogenesis of this form of skin neoplasm. In all cases one has to deal with a papillary hypertrophy and marked hyperkeratosis, the process in some instances starting from apparently normal skin; in other cases a definite connection and point of origin from atheromatous or dermoid cysts can be demonstrated.

**A Case of Acquired Syphilis in a Hereditary Luetic.** O. L. SUGGETT. *Med. Jour.*, New York, 1910, xci, No. 16, pg. 790.

Suggett reports a typical acquired luetic infection of rather unusual severity in an individual who for several years had been exhibited to his classes as a typical case of hereditary syphilis. The photographs which accompany the article show the patient to have had most pronounced hereditary stigmata. The chancre was a mixed infection and was followed by an exceedingly virulent as well as precocious outbreak of secondaries. A brother of this patient also manifesting unmistakable stigmata of congenital syphilis, is likewise reported to have suffered with the acquired form. The author comments briefly upon the failure of the inherited form to confer immunity, and suggests that such cases may throw some light upon the supposed transmission to a third generation.

**Benign Sarcoid Tumors.** OTTO URBAN. *Arch. f. Dermat. u. Syph.*, 1910, ci, No. 1, pg. 175.

Urban gives an interesting review of the previously described cases of the benign sarcoid tumors of which he was able to collect twenty-nine cases from the literature. Among these he includes the case reported by himself in this paper. His patient was a boy of thirteen, who presented himself for a single, indurated, red patch extending from the root of the nose upward onto the forehead to the hair line. The lesion had been present only eight weeks, having begun as a painful nodule at the root of the nose. Despite the fact that the lesion was single instead of multiple, as is usually the case in the benign sarcoid tumors, a provisional

diagnosis of the latter disease was made. That this diagnosis was the correct one was established by the histological examination, which showed the typical deep, subcutaneous, tuberculous-like nodules in which, however, as is the rule in these cases, no softening or caseation had taken place. Repeated tuberculin tests in this case gave uniformly negative results.

Marked improvement and involution of the lesion followed prolonged treatment with injections of arsenic. In discussing the possible tuberculous ætiology of these tumors, the author is inclined to agree with Kreibich and Kraus, that there are two varieties of this disease, which distinguish themselves by their relationship to tuberculosis. On the one hand are those cases which react positively to tuberculin, and which must be regarded on account of this fact and on account of their resemblance to erythema induration of Bazin and other tuberculides as belonging to the latter group of dermatoses. On the other hand are cases such as described by himself, and others, in which the tuberculin reaction is always negative and which, although the histological picture closely resembles that of tuberculosis, have absolutely nothing to do with this disease.

**Hemisorporosis: A New Mycosis.** DE BEURMANN and GOUGEROT. *Arch. f. Dermat. u. Syph.*, 1910, ci, Nos. 2 and 3, pg. 297.

The recent studies resulting in the discovery and isolation of sporotrichosis as a clinical entity have stimulated the study of other mycotic diseases closely resembling this disease. During the past year Ravaut and Pinoy have described "discomycosis" and in March, 1909, Gougerot and Caraven published the first report of a new mycosis which they called "hemisorporosis." In this article the authors have collected the three cases thus far described in the literature of this disease. They believe these cases constitute a symptom complex, entirely new and distinctive. In general it may be stated that clinically the cases resemble closely sporotrichosis. They are characterized by single or multiple gummata of rather rapid development and leading to central necrosis and softening, not affecting the general health of the patient, and absolutely rebellious, or at times even made worse by mercurial treatment. Iodide of potassium, however, as in the case of sporotrichosis, causes the lesions to undergo prompt involution. Cultures from the pus of these cases on Sabouraud's agar revealed a black growth, distinctly puckered, and having a rust-colored, dust-like covering. The growth arranged itself in stellate lines. These cultural characteristics are identical with those of the fungus *hemispora stellata*.

In all three of the cases described, a specific agglutination with the patients' serum was found and in one case, that described by Gougerot



and Caraven, these authors were able to reproduce the lesions experimentally in animals.

**The Histology of Scars.** W. J. HEIMANN. *Arch. f. Dermat. u. Syph.*, 1910, cii, No. 1, pg. 65.

Writing from Jadassohn's clinic in Bern, the writer details the results of his histological studies on various types of scar tissue. In all, twenty-eight lesions were examined, and these included scars resulting from inflammatory processes and from atrophy (*striæ*), those following operation, and scars produced experimentally in guinea pigs.

Following are the interesting conclusions which the author draws as a result of his studies: (1) A more or less typical papillary body is found sooner or later in the great majority of scars. (2) The epidermis over scars is not characteristic; it may be normal, or thickened, or hyperkeratotic in appearance. (3) Elastic tissue fibres were found in scars, only one and one-half months old, and regeneration of the elastica could always be demonstrated as extremely fine fibres, in and about clumps of the old elastic fibres. Elacin was found only twice, in both instances in old individuals and in unexposed parts of the body. It was absent in *striæ* in five cases examined. (4) The collagen lay in dense fibres in the upper layers of the cutis, and in general, parallel to the surface. In the deeper parts of the cutis it was found more loosely and irregularly arranged. (5) Pigment may be present in the corium as well as in the epithelium. (6) An overproduction of elastic fibres was found in scars produced experimentally in the skin of guinea pigs.

**Lupus-Carcinoma.** LUDWIG ZWEIF. *Arch. f. Dermat. u. Syph.*, 1910, cii, No. 1, pg. 83.

Zweif reports six cases of lupus vulgaris in which carcinoma developed upon the lupoid process. In general his cases did not take the malignant course as described for such cases by other authors; death took place in only one case; in the others the general condition of the patients was not markedly affected by the carcinoma. Metastatic tumors in the neighboring lymph glands occurred in only one case (the same in which death occurred), and the writer believes this seldom occurrence to be characteristic for the affection. The cause for the development of a cancer on the tuberculous process is probably not to be looked for in the method of treatment of the latter disease, as most of the cases of lupus-carcinoma show that the carcinoma may develop after any kind of treatment directed toward curing the lupus.

**Multiple Benign Sarcoid (Boeck) and Miliary Lupoid (Boeck-Darier).**  
A. PÖHLMANN. *Arch. f. Dermat. u. Syph.*, 1910, cii, No. 1,  
pg. 108.

The author gives a critical review of the cases of sarcoid described in the literature, to which he adds the report of the cases studied by himself. The clinical aspect of his case appears to have been typical. The lesions occurred in a woman of twenty-four, and consisted of various sized, and various shaped, firm nodules and infiltrated areas in the skin of the face, back, and extensor surfaces of both arms, symmetrically arranged, and developing as a chronic disease without any subjective manifestations. The nodules started apparently in the deeper parts of the skin, and gradually approached the surface, giving to the overlying skin as they did so, at first a light red, later a livid red color. Histologically the lesions showed an infiltration of the corium and subcutis, extending deep down into the subcutaneous fat and consisting of circumscribed nodules separated by connective tissue septa. These nodules were made up almost exclusively of epithelioid cells; a few round cells were seen in the centre of the nodules, but there were no plasma or giant cells, nor was there any evidence anywhere of softening or necrosis in the centre of the nodules. Other writers, notably Boeck, have described as absolutely characteristic for sarcoid infiltration, that it pushes the neighboring tissues and structures aside, but does not directly disturb or infiltrate them. Pöhlmann found this to be true in general in his case, but he was able to demonstrate definitely in one place the direct invasion and destruction of the fibres of the arrectores pili by the granulomatus infiltration.

The relation of this disease to tuberculosis is discussed at some length by the writer. A guinea pig, inoculated with a piece of one of the nodules excised from his case, lived for two months and when killed and sectioned, the piece of tissue was found to have undergone complete absorption, and there was no trace of tuberculosis in any of the organs. Pöhlmann's studies lead him to believe that the so-called multiple benign sarcoid (Boeck) and the miliary lupoid (Boeck-Darier) do not constitute an independent entity, but that they are processes identical with lupus pernio and erythema induratum (Bazin). The belief in the relationship of the disease to tuberculosis as heretofore believed must for the present be retained. The benign character of the granulomatous foci, as previously supposed, must be modified by the fact that at times not only is the neighboring tissue pushed aside by the neoplasm, but it may at the same time be infiltrated and destroyed by it.

**Concerning the So-Called Human Botryomycosis.** C. LENORMANT. *Annal. de dermat. et de syph.*, 1910, i, No. 4, pg. 161.

Lenormant has collected from the literature 126 cases of the so-called human botryomycosis. To these he adds the clinical and histologi-

cal findings in five cases observed by himself. His researches lead him to the following conclusions:

1. The pedunculation of the tumors, their frambœsial form, the frequency of ulceration and hæmorrhage, and the benign character of the lesions render the diagnosis an easy one.

2. The anatomy of the tumors is constant: they are granulomata, composed of granulation tissue rich in fibrous tissue and more especially in blood vessels. Their pedunculated form depends upon their primary development under a thick and resistant epidermis, and their subsequent bursting through a narrow perforation in the latter.

3. The cause of their development remains unknown; the rôle played by trauma and infection in the ætiology, seems the most probable, but as yet not the demonstrated cause. The identity of these tumors with the lesions of equine botryomycosis is very doubtful.

4. It would be better to abandon the name botryomycosis, as it suggests an ætiology which to-day has been cast aside. The term granuloma pediculum proposed by Frederic is better, in that it suggests the essential clinical and anatomical features of the lesions.

Contribution to the Study of Idiopathic Atrophy of the Skin. R. BECK.

*Arch. f. Dermat. u. Syph.*, 1910, c, Nos. 1 and 3, pg. 117.

Beck reviews the entire subject of idiopathic atrophy of the skin, and describes briefly the cases found in the literature and classified variously under this title and also under acrodermatitis chronica atrophicans, and erythema paralyticum. The author's researches deal with the clinical and histological study of nine cases seen at the University Polyclinic at Königsberg. A marked inflammatory reaction was found in the sections of all the cases studied, and parallel with this reaction, and according to the writer dependent upon it, were characteristic changes in the connective tissue, consisting in the homogeneous degeneration of the connective tissue fibrillæ and likewise a disappearance of the elastica. The latter, however, occurs as a somewhat later process owing to its greater resistance.

On the ground that his studies have proved the contrary, Beck objects to the assumption that in these cases one is dealing with an atrophy which is in a true sense idiopathic; as stated before, he believes the atrophy a condition secondary to a primary inflammatory change. He proposes, therefore, to discard the name idiopathische Hautatrophie and to substitute for it, the term dermatitis chronica atrophicans for that type of the disease in which clinically the inflammatory features are marked, and erythema chronica atrophicans for that form in which erythema is a more marked feature. In those cases in which the disease is limited to the extremities, the author concedes the designation proposed by Herxheimer, acrodermatitis chronica atrophicans, as applicable.

Gangræne from Syphilitic Endarteritis. A. RAVOGLI. *Lancet-Clinic*, 1910, ciii, No. 7, pg. 181.

Syphilis may be responsible for the production of gangræne in one of three ways: (1) Gangræne may occur *en masse*, when a principal artery of a limb is occluded. (2) At the surface when a district of superficial arteries is affected. (3) In the centre of syphilitic lesions. In all cases the cause of the gangræne, according to the author, is due to the direct action of the spirochætæ on the vessel wall. Raynaud's disease distinguishes itself from true syphilitic gangræne in being symmetrically spasmodic, and by the fact that gangræne is not the inevitable result of the disease. "We can probably look at this mysterious disease as a parasymphilitic affection." The author presents several cases illustrative of his theme, together with the histological vascular changes found. His conclusions are as follows:

1. Syphilis is liable to produce gangræne at any period of the disease.

2. Gangræne *en masse* occurs more frequently from endarteritis in the late stage of syphilis.

3. Gangræne may be the result of acute peripheral endarteritis of the small arteries, causing necrosis of superficial areas of the skin.

4. Gangræne may be the result of the pressure of the infiltrating elements on the blood vessels and on the tissues in the centre of deep syphilitic lesions.

The Pathology and Treatment of Skin Tumors. F. R. FORD. *New York State Jour. Med.*, 1910, x, No. 4, pg. 189.

During three years the writer examined about fifty specimens of tumors of the skin and mucous membranes removed at operation at St. Luke's Hospital at Utica. With regard to the epitheliomata he accepts the classification proposed by Bloodgood, according to the origin of these tumors from the various layers of the epidermis; thus, he speaks of carcinoma basocellulare, carcinoma cuboecellulare and epithelioma spinocellulare. This classification is not only based on pathological grounds, but these types vary greatly, according to the writer, in their relative malignancy. The various benign tumors of the skin are also described along with the report of a case of mycosis fungoides. In general, however, there is little new or of particular interest to dermatologists in this paper.

Melanomata and Some Types of Sarcoma of the Skin. JOHN A. FORDYCE. *Jour. Am. Med. Assn.*, 1910, liv, No. 2, pg. 91.

The author discusses at length the theories concerning the epithelial as against the endothelial origin of melanomata. His own studies lead him to believe that the nævi giving rise to melanotic tumors may have a two-



fold origin. "In some the character of the cells conforms more closely with those of the epidermis and can hardly be distinguished from prolongations of the latter, which enter the mole. In others there appears to be another variety, consisting of cells with vesicular nuclei, with faint or no tinctorial properties and a well-defined border. Their shape in general is round but this may be modified by mutual pressure. Fibres from the connective tissue may be seen between individual cells and groups of them."

The author reports two cases of melanoma and one of myeloma with the histological findings and photomicrographs to illustrate the latter.

**Syphilis and the American Negro: A Medico-Sociologic Study.** T. W. MURRELL. *Jour. Am. Med. Assn.*, 1910, liv, No. 2, pg. 846.

The presence and spread of syphilis in the American negro since the Civil War is treated in this paper in a most interesting fashion. The widespread distribution of the disease is explained in the promiscuity of the sexual relation, and the utter ignorance and apparent indifference with regard to the seriousness of the disease. The late syphilides and the more serious ones are more often seen in the negro because the treatment is almost never adequate, due to the fact that the patient will continue treatment only while actual visible lesions are present. The prevalence of the disease and its ravages have entirely reversed antebellum figures relating to birth and death rate, and have increased enormously the proportion of degenerates and the insane among the negro.

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## BULLOUS DISEASES.

By FRANK CROZER KNOWLES, M.D., Philadelphia.

**The Ætiology of Epidermolysis Bullosa.** M. F. ENGMAN and W. H. MOOK. *Interstate Med. Jour.*, July, 1910.

Engman and Mook, in 1905, reported the histological findings in two cases of epidermolysis bullosa before the American Dermatological Association; in 1909, they recorded the microscopic picture in two others. The present patient is twelve years of age, healthy and with a good family history. Numerous large and small bullæ were present on the hands, forearms, neck and a few on the face. There was considerable secondary infection on the excoriated surfaces where bullæ had ruptured. According to the history, a "blister" was noted a few days after birth upon the left heel, and the tendency to "blister" formation, following slight or severe trauma, has since been present. Numerous cicatrices were present where former lesions had healed. The nails were rough, corrugated, some partially destroyed, though none entirely. A piece of skin, apparently normal, was examined histologically; the epidermis was practically nor-



mal, except for slight œdema of the basal epithelial cells. The greatest change was in the almost complete absence of elastic tissue in the upper and papillary portions of the derma; an occasional fine fibril or minute network of only the finest fibrils being seen in the portion connecting the epidermis. There was slight dilatation of the capillaries in the upper portions of the cutis. There was considerable elastic tissue in the deeper portion of the cutis, the fibres, however, were shorter, thicker and not so wavy as is usually found in the normal skin. No cellular infiltration was found about the vessels. The lymph channels and spaces all showed marked dilatation. The authors feel justified in asserting that the absence of elastic tissue, absent in the five patients examined, is the ætiologic factor in the disease. Two excellent colored plates, one showing the arrangement of elastic tissue in the skin of normal individuals and the other the absence of the same in cases of epidermolysis bullosa, illustrate the article.

**Epidermidolysis Bullosa Congenita (Epidermolysis Bullosa Hereditaria).**

J. P. KANOKY and RICHARD L. SUTTON. *Jour. Amer. Med. Assn.*, April 2, 1910, p. 1137.

Kanoky and Sutton reported a case of this disease in a girl of three years. The cutaneous history of the family was negative. The patient had always been well and the skin and the nails were apparently healthy at birth. Two days after birth a large bulla appeared on the outer side of the leg and since then any injury is followed by a bullous outbreak; some of the bullæ having hæmorrhagic contents, depending upon the severity of the trauma. The skin is never entirely free from lesions; no part appears to be exempt. As a result of repeated exfoliation the finger-nails have practically disappeared and the toe-nails have become atrophied and deformed. In consequence of injuries to the scalp and the ensuing development of bullæ, several bald areas have appeared. The lesions are almost painless, with very little itching. Bullæ form in from one-half to two hours after the injury. Differential blood counts show a distinct eosinophilia. The interesting feature of the report was the histopathological examination, which showed a characteristic absence of elastic tissue in the upper corium. Below the subpapillary region the network is fairly heavy and regular, but as it passes upward it quickly shades off into a thin, friable-looking mesh which disappears practically altogether when the upper derma is reached. The fibres are entirely absent in the neighborhood of the hair follicles. The authors consider that epidermidolysis bullosa congenita is the proper name for the disease. Engman and Mook, as mentioned by Kanoky and Sutton, pointed out that the elastic fibres were not only absent in the papillary and the subpapillary regions in the bullæ, but apparently in the normal skin as well. The article is illustrated with photographs of the patient, showing the character of the

lesions on the skin, and with photomicrographs, presenting an absence of elastic tissue.

**Pemphigus and Dermatitis Herpetiformis.** GEORGE PERNET. *Brit. Jour. Dermat.*, Jan., 1910, p. 1.

Pernet considers that too many bullous eruptions are termed pemphigus. Differentiation of the various bullous eruptions should be more sharply drawn. Acute pemphigus, such as occurs in butchers or those who handle animal products should, as an example, be classed separately. Papers have been written on this phase of the subject by the author, Bulloch, and by Grindon. Pernet described a bullous outbreak in a married woman of fifty-seven years. The disease began with a small, painful lump inside of the vulvo-vagina, which became bullous and ruptured; later, another lesion of the same character and in the same location developed, this was followed by other small and large bullæ, in the same neighborhood. Some days afterward, a generalized bullous eruption developed. The mucous membranes of the tongue, the hard and soft palate and the uvula were attacked by bullæ. The lesions varied from two to three inches in diameter. Two months after the start of the attack the skin was free from lesions, a mixture of arsenic and opium having been used. Less than two months following the disappearance of the eruption, a multiform outbreak occurred, consisting of erythema, papules and vesicles, circinate and gyrate in configuration, of the dermatitis herpetiformis type. The lesions became, however, in a few days mostly bullous, which disappeared under the same treatment as originally prescribed.

**Pemphigus Foliaceus.** R. CRANSTON LOW. *Brit. Jour. Dermat.*, 1909, Nos. 3, 4, 5, pp. 101 to 135.

The author covers the subject thoroughly in an article of thirty-five pages, with several illustrations and sixty-three references. Low reported three cases from the service of Dr. Norman Walker. The first case corresponded to the classical description of pemphigus foliaceus, beginning as a bullous eruption, which lasted for some time as such and then took on an exfoliative character, the outbreak becoming generalized. Although bullæ continued to form on the limbs, during the fourteen months she was under observation, the condition having started about eight months before then, the general surface of the skin was red and raw looking and the epidermis peeled off in characteristic large, leafy flakes. The skin at first was so soft that the slightest pressure removed it completely, leaving a raw surface. This, it was stated, was considered pathognomonic by Mikolsky. The raw surfaces were somewhat painful to the touch. There was a peculiar sickly odor which was extremely disagreeable and penetrating. The temperature was irregular, with a nightly rise and a

daily remission. The general nutrition was maintained much better than the first appearance of the patient indicated.

The second case dated back over eleven years, the condition first resembling dermatitis herpetiformis, later becoming characteristic of pemphigus foliaceus and still later, when the case showed improvement, reverting to the dermatitis herpetiformis type.

The third case, although showing at first an appearance like pemphigus foliaceus, had the multiform character of dermatitis herpetiformis, many lesions being erythematous in character, with a patchy and often ringed or circinate arrangement. This latter case was probably one of severe dermatitis herpetiformis resembling markedly pemphigus foliaceus.

According to the author, pemphigus foliaceus may start in a variety of ways but usually begins as a pemphigus chronicus or dermatitis herpetiformis. The bullous element in the eruption may disappear and be replaced by a general exfoliation alone, or the formation of blebs and exfoliation may coexist. No definite lesions were found on the mucous membranes in the cases. The exfoliation takes place usually between the stratum lucidum and the stratum granulosum. The layers of the skin are so loosely adherent in the disease that exfoliation is inevitable, if slight pressure be applied. There was a somewhat papillomatous condition in certain areas in these cases, which various authors have described; which, however, was probably due to the arsenical treatment.

The microscopic examination of the cases has been fairly uniform. There is a great dilatation of all of the blood vessels in the corium, most marked in the subpapillary plexus; the lymph spaces and the vessels are also fully dilated in the papillæ and deeper parts of the corium. The connective tissue is œdematous and swollen, and may show hyaline and colloid degeneration. Some investigators found a marked diminution in the elastic tissue in the deeper parts and total absence in the superficial portion of the corium and around the sweat glands; others found the reverse. The Malpighian layer shows an elongation of the interpapillary projections and a thinning of the suprapapillary layer of cells; the cells are swollen and lose their prickles and there are often spaces between the cells, and occasionally actual vesicles.

Mitosis is a well-marked feature in the palisade layer. Where the horny layer is present there is a parakeratosis with œdema of the cells. Numerous leucocytes are present, chiefly of the eosinophile type.

Low gives the blood findings in his own cases and in those of nine other writers; the red blood cells are usually normal or diminished in number, but never to a great degree, no mention being made of any alteration in shape and size. As a rule the hæmoglobin is slightly diminished. The total number of white blood cells varies; in some cases being below normal, in others slightly above. The polymorphonuclear leucocytes are relatively diminished and usually at the expense of the mononucleated

cells. The large mononucleated cells are somewhat increased in number. Eosinophiles were diminished in three cases and markedly increased in six; the author's two cases exhibited an eosinophilia.

Vaccine treatment was carried out by Low in the two cases of pemphigus foliaceus, but no definite conclusion was reached as to its efficacy. Autogenous injections were used, a pure culture of staphylococcus aureus being obtained from the bullæ. The opsonic index governed the frequency and the size of the dose, the injections varied from 250,000,000 to 500,000,000 staphylococci.

Indican was found in the urine of the first case; numerous specimens giving the characteristic reaction. There was a marked diminution in the excretion of urea. An abundant quantity of chlorides was found in the urine.

**The Present State of Our Knowledge of Pemphigus.** J. M. H. MacLEOD.  
*Practitioner*, 1909, No. 82, p. 371.

MacLeod first mentions the various bullous eruptions which were formerly grouped under the heading of pemphigus; pemphigus congenitalis (epidermolysis bullosa hereditaria), pemphigus contagiosus (impetigo contagiosa bullosa), pemphigus gravidarum (dermatitis herpetiformis), pemphigus hystericus, pemphigus leprosus, pemphigus neonatorum (impetigo contagiosa bullosa) and pemphigus syphiliticus.

The author next considers the anatomical and pathological formation of bullæ. In the formation of bullæ there is first a dilatation of the blood vessels and the lymphatic spaces of the underlying corium, a serous exudation, and then a perivascular cellular infiltration. The roof of the bleb may consist of all of the layers of the epidermis or the bulla may be found in the epidermis, with the corneus layer, alone, for the roof. Where the epidermis is tough the bleb tends to form beneath the epidermis; the reverse is noticed where the epidermis is weaker. As the walls of the blood vessels of the upper portion of the corium are composed of an endothelial layer and have no muscular coat they are easily dilated by internal pressure and readily rupture.

In order that a marked increase in the pressure of the cutaneous capillaries should take place, accompanied by dilatation and exudation of serum, it is necessary that more blood should flow into the skin by an inhibition of the vasoconstrictor tone of the underlying small arteries, without a compensatory dilation of the corresponding veins, or that, apart from any increased flow from the arteries, a blockage should be present in the small veins, which increases the pressure in the capillaries.

The author considers that the majority of bullous eruptions result from the presence of toxins in the skin, of microbic or chemical origin, or they may have been brought by the blood channels. The nervous origin



of bullæ has been considerably exaggerated. The chief factor in the production of bullæ, when the nerve is deranged, is probably the interference with the vasomotor control of the small arteries.

MacLeod divides pemphigus into the acute and the chronic; the chronic is subdivided into the pemphigus foliaceus and pemphigus vegetans. Acute pemphigus is applied to a type of acute bullous eruption, associated with severe constitutional symptoms of a septicæmic type, and usually fatal. This acute type has usually occurred in adults, most of the patients being butchers, or those who handle animal products. Infection through an abrasion on the finger is the usual start of the generalized bullous eruption.

Several microorganisms have been mentioned as the cause of acute pemphigus; Bulloch isolated a diplococcus from Pernet's case which was pathogenic to a guinea pig. This diplococcus is identical with the one described by Denme in similar cases. The author describes in detail the characteristics of chronic pemphigus, differentiating it from dermatitis herpetiformis, from pemphigus foliaceus and from pemphigus vegetans.

**Pemphigus Foliaceus.** ALFRED SCHALEK. *Jour. Amer. Med. Assn.*, July 2, 1910, p. 4.

Pemphigus foliaceus occurs on an average once in every 5,000 cases of skin diseases; Crocker has seen but six cases during his entire professional career. The bulla may be located interepithelially or between the epidermis and the corium. The epithelial cells are œdematous and swollen. There is occlusion of the interspinous spaces. The corium is the seat of a mild, probably secondary inflammation. The papillary blood vessels are dilated and surrounded by small mononuclear leucocytes. Schalek reported a case in a farmer, a male of thirty-six years. The patient has been under observation for nine months, new lesions continuing to appear. The general surface, excepting the face and the mucous membranes have been involved. Schalek noted in his patient, as pointed out by Weidenfeld, that slight rubbing of the skin or a mild trauma was invariably followed by a bleb. The general health has been fairly good, excepting for a loss of seventy pounds in weight and some anæmia. There is a moderate eosinophilia present.

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#### ERRATA.

In the memorial article of the late Dr. James Nevins Hyde, which appeared in the November, 1910, issue of *THE JOURNAL*, the fourth paragraph, page 628, an error was made. It should have stated that Dr. and Mrs. James Nevins Hyde had one son, Charles Cheney Hyde, and that James Nevins Hyde, II, was their grandson.

The description of Plate VII, Fig. 3, to illustrate Drs. Varney and Jamieson's article entitled "Case Reports," published in the January, 1911, issue of *THE JOURNAL* should read: Case 4, Granuloma Annulare (Galloway).



# THE JOURNAL OF CUTANEOUS DISEASES

## INCLUDING SYPHILIS

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# THE JOURNAL OF CUTANEOUS DISEASES

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## INFECTIOUS ECZEMATOID DERMATITIS. POSSIBLE INFLUENCE OF ANAPHYLAXIS IN SKIN REACTIONS.\*

By JOHN A. FORDYCE, M.D.,

Professor of Dermatology and Syphilology, University and Bellevue Hospital  
Medical College, New York.

IN observing a large number of cases of dermatitis met with in my hospital and dispensary practice, I have been struck by the frequency with which forms of skin infection, usually diagnosed as eczema, have been secondary to some antecedent lesion or disease of the skin, such as scabies, wounds or traumatisms which have become infected, abscesses, furuncles, intertrigos, sinuses left after operation on bones, etc. In other words, the percentage of eczemas which were not preceded by some antecedent pathological condition seemed to be in the minority. At times, when the eczematous and pyogenic processes have coëxisted, it has been difficult to determine which condition was the primary one. On the other hand, where eczema and furunculosis were coincident, it was learned, on making inquiry of the patient, that the furuncles had in many cases antedated the outbreak of eczema. In addition to cases resulting from a purulent discharge or skin infection, I have noted others in which one or more scaling patches of dermatitis present for an indefinite time suddenly assumed an acute inflammatory reaction and spread by continuity or independent foci to other parts of the body. The observation of facts like these has strongly impressed on me the view that many varieties of so-called eczema which we meet with belong to the large group so carefully described by Engman in 1902 under the name of *infectious eczematoid dermatitis*.

\*Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

We are all familiar with the ordinary reactions produced in the skin by pus organisms, as impetigo, infected scratch marks, cellulitis, lymphangitis, etc., but we are apt to give only scant recognition to the more complex types of cutaneous eruption caused by these organisms or their toxins, resting satisfied with their perfunctory disposition of "eczema" or "dermatitis." It is this group in particular that I wish to emphasize. The rôle of the streptococcus and the staphylococcus in the production of certain types of cutaneous disease is no longer questioned. We accord to the former a definite ætiological relationship with erysipelas, impetigo contagiosa, and certain forms of infectious bullous eruptions, and we associate the staphylococcus with furuncles and other forms of skin infection and with the formation of certain papillomatous outgrowths, as dermatitis vegetans, but many of us hesitate to extend the rôle of these organisms, at least as causative agents, to such affections as the intertrigos and eczemas. The failure in these cases to satisfy Koch's postulates, in my opinion, does not militate against such a relationship, since other factors probably enter into the ætiology, as individual peculiarities of reaction, susceptibility, virulence of and variation in the strain of infecting organisms, and possibly a modification of the infection brought about by the development of antibodies in the blood or modification of the body fluids. From the work of Bockhart, nearly ten years ago, we learned that it was possible to produce an eczema with the filtrate of bouillon cultures of staphylococci; that the excretion products or toxins of these organisms always called forth an eczema and never pustulation, and that the type of eruption, whether papular or vesicular, probably depended on the character of the skin.

Bruck and Hidaka, experimenting with the agglutination and antilysin properties of the cocci isolated from cases of eczema, found that a biological reaction was produced in which the agglutination and antilysin properties of the blood were increased and that this antibody production was influenced by the duration and severity of the attack of eczema. The reaction being the same as in the genuine pyogenic infection, the authors conclude that at least one must assign to these cocci a greater rôle than that of the harmless parasite.

We are indebted to Sabouraud for calling our attention to forms of dermatitis which he named acute and chronic streptococcic epidermatitis after their supposed ætiological factor. Clinical observers usually class these cases with the eczemas, but in my opinion they

deserve to be considered separately. They frequently begin as intertrigos, become moist, and spread by direct continuity and in separate foci over considerable areas of the skin, sometimes the entire surface of the body being involved in a catarrhal inflammation. It is this type of eruption I so frequently see in the City Hospital in patients who have been inmates of lodging houses, are anæmic and starved, and have had little inclination or opportunity to change their clothing or look after other details of their personal hygiene. They usually have pediculosis and as a result of the lesions produced by the parasites they develop ecthyma which, in certain cases, is followed by this type of catarrhal dermatitis believed by Sabouraud to be of streptococcic origin. In these patients the lowered body nutrition and lack of cleanliness are factors which probably influence the growth and spread of the streptococcus. Other forms of streptogenic intertrigo are that of the labial commissures called by the French school *perlèche*, and that so commonly met with behind the ears in children. It is not unusual to see both varieties of dermatitis give rise to a more extensive eruption either by continuity or by autoinoculation to more distant foci.

From a large experience with cases of eczematoid dermatitis in which a history of antecedent pus infection was obtained, the conviction has come to me that irritation of the skin produced by discharges from abscesses, sinuses, ulcers, and other pus secreting surfaces is the true basis of these phenomena. This irritation may be followed by eruptions of most diverse form, such as a dry scaling dermatitis or large moist areas, or a combination of dry scaling lesions and moist and crusted ones, with the occasional occurrence of papillomatous overgrowth of the epidermis. Sometimes the picture is that of an acute vesicular eczema and cannot be distinguished from the usual forms of eczema which have been attributed to some internal disturbance. Not infrequently in the neighborhood of the infecting lesion the inflammation is more intense and manifests itself by œdema, swelling and redness, vesicular or bullous formation which is rapidly followed by denudation of the horny layer, and a red exuding surface on which groups of the so-called eczema pores are here and there visible. In other words, the epidermis is exfoliated in sheets rather than over individual vesicles. This type of dermatitis in the majority of cases is not so pruritic as the so-called idiopathic eczema; but there are exceptions, it having been a marked symptom in several of my patients. In these cases extension of the disease is probably facili-



tated by the scratching. In all or most of these forms the affection is distinctly autoinoculable, and in many a condition of chronic dermatitis or eczema persists for months or for years. There may or may not be relapses; in many recovery is permanent. On the other hand, with a lowered resistance to pus infection, recurrences take place, such as furuncles and abscesses with a subsequent eczema. With eczema as a sequel to furunculosis cause and effect are obvious. It is easy to understand how irritation of the surrounding skin by a purulent discharge may produce such a reaction by the chemical products of pus organisms, but in certain of these cases the outbreaks occur at a distance from the primary focus and are not to be explained on the ground of autoinoculation or direct conveyance of the irritant substance. Here modern serological investigation may help us to arrive at a rational explanation for such distant outbreaks, as it is not impossible that changes induced in the blood serum by a very extensive surface infection may be productive in the appearance of the eruption in distant parts of the body.

The following cases are illustrations of some of the types of the disease met with:

CASE I. Mrs. X.; forty years of age; born in the United States. The patient had an attack of eczema seven years ago following an abscess under her arm. The eruption spread from here to other portions of her body and proved very refractory to treatment. During her pregnancy it disappeared entirely and she remained well until the child was fifteen months old. Then another attack began about the genitals and became general. Four years ago she had an abscess in the groin and subsequently an outbreak of eczema. Recovering from this, she was free until two years ago when, after an operation for mastoiditis, the skin about the wound became the site of an eczematoid dermatitis. However, it remained localized for a time when it disappeared and she had no remissions until January or February of this year, when the present attack began on her scalp. At the time I saw her, the latter was a mass of crusts exuding sero-pus, was intensely inflamed, and the patient had been obliged to sacrifice her hair. The process had extended to the face, neck, chest, back, and breasts, the abdomen, under the breasts, the axillæ and arms (Fig. 1). Her ears were swollen and red; back of them and at the commissures of the mouth, fissures were present. The eruption over her back, shoulders, arms, and lower portion of the abdomen was dry and covered by a fine branny desquamation. In the axillary and mammary regions it had the characteristics of a weeping dermatitis—an intense erythema with the horny layer absent over the entire surface leading to a uniform red area, with here and there denuded vesicles as met with in ordinary types of eczema. The condition was very pruritic.

CASE II. Mrs. E.; fifty-four years of age; born in Germany. There was no history of cutaneous disease. The present eruption followed an operation for mastoiditis four years previously, the wound discharging ever since. The affection first developed about her ear, gradually spreading to the face, scalp, neck, upper trunk, and arms, as an exudative, scaling, and crusted eruption accompanied by intense pruritus. She also had a marked alopecia.

CASE III. Mrs. W.; twenty-seven years of age; born in the United States. A strong and healthy looking woman, but careless about her personal hygiene. Some weeks prior to the skin eruption she had an abscess of the breast which was opened and drained. During the slow healing of the wound, papulo-vesicular lesions appeared on the breast, which later coalesced until large pustulo-crustaceous eczematous plaques were formed covering nearly the entire breasts (Fig. 2), with smaller outlying lesions on the chest, shoulders, and arms.

CASE IV. Mrs. T.; forty years of age. For several weeks the patient had a fissured nipple from which a vesicular and crusted eczema spread to the breast. About a week later she inoculated the side of her face, ear, and neck, a moist dermatitis developing over this region. The lesion on the breast was very pruritic, and as the patient rubbed it a great deal, it is possible that she infected her face from the original area.

CASE V. Mrs. Z.; fifty-three years of age; a Russian. The history of her eruption dated from an abscess of the leg which was incised, and drained. Five days later she developed a vesicular dermatitis about the wound, the skin of the entire leg being converted into an erythematous exuding surface.

CASE VI. Mrs. V.; twenty-five years of age. A paronychia of the index finger followed by an eczema of that finger and the back of her hand. The vesicles soon became pustular and the eruption progressed by peripheral extension.

CASE VII. F. M.; thirty years of age; born in the United States. A patient in the City Hospital. He had an attack of furunculosis which was followed two weeks later, by a diffuse erythematous rash beginning at the sides of the neck, and extending down over the trunk, arms, and legs (Fig. 3). This latter took on papulo-vesicular characteristics with several large scaling areas.

In two young children under my care an attack of furunculosis was followed in the one by a generalized eczema of the papulo-vesicular type, and in the other by a localized eczema of the extremities and trunk which disappeared and recurred over a period of nearly two years.

An ordinary folliculitis is not infrequently followed by this type of infectious dermatitis. I have a patient under observation now in whom a staphylococcic folliculitis near the commissure of the mouth gave rise to an eczema at the same site.

According to Sabouraud, pediculosis seldom eczematizes, while eczematization after scabies is very common. While this statement may be accepted as a general one, cases of infectious eczematoid dermatitis, in my experience, are quite frequently met with after pediculosis or rather consecutive to the ecthyma which follows the infected lesions of pediculosis corporis (Fig. 4).

Numerous cases of this type of dermatitis might be described, but since they are all familiar, it would be a waste of time to multiply descriptions which with little variation apply to other members of the group.

An attempt to make a division of eczema according to ætiology

or clinical manifestations is a matter of extreme difficulty, but the separation of these forms of eczematoid dermatitis of Engman is worthy of much more general recognition than has been accorded to it. It seems to me that the more we consider forms of skin inflammation the more rapidly we can explain the production of these forms of eczema produced by irritation brought about by the chemical products of pus. The association of eczematoid dermatitis with purulent discharges strongly suggests that it signifies more than an accidental coincidence and leads to the belief that there may be a common ætiological factor in these cases. The experiments of Bockhart, demonstrating that the staphylococcus could produce a catarrhal dermatitis, clear up the question in a very logical and convincing manner. Of course, we must recognize the fact that a catarrhal dermatitis excited by a chemical or mechanical irritant may be independent of any infection of this kind, and that the serous discharge arising from such a dermatitis may readily become infected with pyogenic organisms and spread to other parts of the body by auto-inoculation. The question, therefore, is not altogether a one-sided one.

It is admitted by the majority of dermatologists at the present time that a large number of dermatoses, including eczema, are simply forms of cutaneous reaction which may be evoked by a vast number of internal and external causes. This is perhaps best illustrated by urticaria, where identical lesions are produced by an irritant from within or by one from without. While it is often possible to identify the causative factor, there are certain types of urticaria which are chronic and which hitherto have baffled interpretation from an ætiological standpoint. The most searching investigation of the digestive, nervous or other systems fails to throw any light on their causation. From the serological investigations made during the last few years, however, we are gaining some elucidation of the nature of these relapsing urticarias. Recently Bruck confirmed the results obtained in sensitizing guinea pigs and rabbits to hog and sheep serum and crab meat. The hypothesis that certain morbid manifestations are the result of an anaphylactic process brought about by the intake of albuminoid substances derived from pork, mutton, etc., as the case might be, gives rise to the question whether the same hypothesis might not be applied to certain conditions met with in man. Bruck quotes the observations he made on a patient from his Clinic who had been poisoned by eating pork sausage two years previously, since which

time he had been unable to partake of pork without precipitating an attack of urticaria. With serum from this patient he sensitized two guinea pigs and twenty-four hours later gave them intraperitoneal injections of hog serum. Both developed typical symptoms of anaphylaxis, one of them dying eighty minutes later. Four other animals which he used as controls remained well. He thus demonstrated the transference of typical hypersusceptibility to normal animals and the specific anaphylaxis against pork albumin.

Sellei endeavored to demonstrate that a hypersusceptibility might be present in patients with psoriasis vulgaris. He selected several in whom the eruption was regressing and introduced subcutaneously an emulsion made from their own lesions. In a few days this was followed by a rise of temperature and a new outbreak which was most marked in the areas of involution. In his opinion the extracutives and tissue elements injected subcutaneously bring about a condition of anaphylaxis.

It has occurred to me that further investigations in this field might throw some light on the types of eczema which become chronic and resist the usual methods of treatment. One of the most prominent features in many patients with eczema is the increased susceptibility their skin presents either from the beginning or which develops as the process progresses. It is this heightened susceptibility which leads to relapses, an example of which is often seen in workers in chemical laboratories in whom the vapor of formaldehyde provokes forms of dermatitis of the nature of eczema. The same condition is seen in individuals who have once developed dermatitis from poison ivy or other local irritants. After one attack many of these people are increasingly susceptible to the specific irritant, and it is quite possible in these cases to attribute the frequent recurrences to a state of anaphylaxis. That this condition is present in a certain number of individuals is explained by the small quantity of a given irritant necessary to bring about a cutaneous reaction. In some individuals, if sufficiently concentrated, it will produce changes similar to those met with in dermatitis or eczema, in others a lesser quantity will suffice for such a reaction and in the minority of people, a quantity too insignificant to have any influence in those of the first two types quoted will be sufficient to induce similar changes. Individuals who show such an increased susceptibility to irritants may perhaps be sensitized to the chemical products of pus organisms, just as patients with tuberculosis may be sensitized to tuberculin.



Assuming, therefore, that we have a state of hypersusceptibility which may be present either from birth or acquired from some change in the biological properties of the blood serum due to various affections, we can readily understand how irritants of the most varied kind may evoke a dermatitis. These serological changes might also explain the simultaneous or successive occurrence of skin and mucous membrane affections in patients who have become sensitized to an irritant, in the one case acting on the neurovascular apparatus of the skin and in the other of the mucosa. In experimental anaphylactic shock produced in dogs, Pearce and Eisenbrey found a sharp fall in blood pressure (50-70 mg. Hg.) followed by paralysis of the smooth muscle of the blood vessels. In the guinea pig the results are somewhat different, reaction causing respiratory disturbance which is attributed by Auer and Lewis to constriction of the smooth muscle of the bronchioles. Other symptoms observed have been hæmorrhages into one or more viscera, the skin, and angioneurotic œdema.

The question of anaphylaxis brought about by the use of horse serum, food or bacterial proteins is an exceedingly interesting one from a dermatological standpoint, and will probably render much clearer our understanding of many forms of skin reaction, such as the erythema group, including purpuras and various types of eczema. We have all recognized heretofore the existence of a condition of vulnerability of the skin. It is this vulnerability perhaps which modern experimental pathologists have shown to be due to the presence of some special sensitizing substance in the blood. Every now and then we see cases of fatal bullous eruption or fatal forms of erythema multiforme with bullous manifestations affecting not only the skin but the mucous membranes. They are accompanied by an intense general reaction, as fever, and sometimes terminate in coma and death, as in a case I saw recently. Here we must imagine that there has been some unusual infection which can not as yet be identified, or that the patient affected in this manner has been accidentally sensitized to bacterial or food products. It seems to me that if we apply the knowledge that has been acquired in experimental medicine to some of our skin affections and recognize the futility of insignificant clinical division of disease, some advance in the ætiology of this obscure group of cases will be made.





FIG. 1.

Infectious Eczematoid Dermatitis.





FIG. 2.  
Infectious Eczematoid Dermatitis, following an abscess of the breast.





FIG. 3.

Infectious Eczematoid Dermatitis, following furunculosis.







FIG. 4.

Infectious Eczematoid Dermatitis, following ecthyma.





FIG. 7.  
Infectious Eczematoid Dermatitis, simulating psoriasis

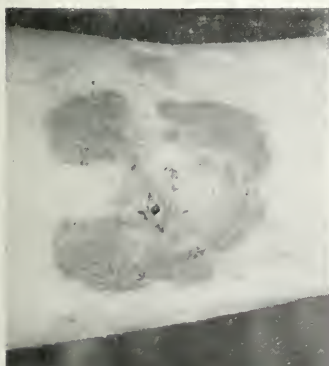


FIG. 5.  
Infectious Eczematoid Dermatitis,  
following a boil.  
Scar of boil in centre of patch.



FIG. 6.  
Infectious Eczematoid Dermatitis.  
Cultures from vesicles yielded staphylococcus aureus. Eruption spread to  
face and ears by autoinoculation.







FIG. 8.  
Infectious Eczematoid Dermatitis,  
simulating psoriasis.



## DISCUSSION

DR. ENGMAN said he was gratified to hear Dr. Fordyce confirm some of the observations he had reported in 1902. The subject was a large one and worthy of investigation. Heretofore many of these cases had been classed as impetiginous eczema. In 1901 he had studied an epidemic of bullous impetigo in St. Louis, and found that some of these cases shaded into a condition similar to dermatitis exfoliativa, while others resembled the dermatitis repens of Crocker. Dr. Engman said that from his investigations of these cases, which extended over two summers, he came to the conclusion that this disease was undoubtedly due to the action of the staphylococcus, a polymorphous coccus, with different morphologic and chemical affinities. It was sometimes difficult to find the organism, but as Bockhart had pointed out, only a few were sufficient to induce a decided local effect on the blood vessels. Of course, staphylococci were always present on the skin, but under certain conditions, due to some unknown influence—perhaps lowered general or local resistance on the part of the individual or increased virulence of the microörganism—these lesions developed. Dr. Fordyce, in his paper, had opened up a field which showed the way to a great deal of valuable work.

DR. HARTZELL said he was extremely interested in the very valuable paper read by Dr. Fordyce. Personally, he was quite convinced that in a certain number of these cases there was a local sensitizing of the skin. Definite eruptions were found in certain localities again and again in individuals who at first showed no such sensitiveness to such irritating agents.

Speaking of formaldehyde, which had been referred to, Dr. Hartzell said he knew a teacher who had made use of this drug for years without suffering any ill-effects therefrom. Later, he developed an unusual sensibility to this drug, so that he could not even enter a room in which there was any formaldehyde vapor without a resulting eruption on the hands. His hands had apparently become sensitized to the effects of formaldehyde. The speaker said he realized that there were certain general conditions that might produce a similar effect, but he was firmly convinced that certain local areas might acquire a "bad habit," which in turn was responsible for the local sensitiveness of the skin.

DR. FORDYCE said that if we wished to progress along these lines, if we wished to clear up the ætiology of a large number of obscure diseases of the skin, the clinician must enlist the services of the experimental pathologist, the histopathologist, and the chemist. All must work together, and it was only in this way that we could solve these problems that depended on metabolic disturbance.

## A CASE OF FRAMBOESIA.\*

By CHARLES J. WHITE, M.D., Boston,  
Instructor in Dermatology in Harvard University,  
and

ERNEST E. TYZZER, M.D., Boston,  
Assistant Professor of Pathology in Harvard University.

**B.** D., twenty years of age, a Porto Rican sailor, entered the skin ward of the Massachusetts General Hospital on September 24, 1909, and left it two months later apparently cured.

Communication with this man was very difficult and there must be, therefore, interesting facts in the history of his disease which we shall never know. Apparently, there were no prodromata and the four verrucous cutaneous growths constitute the sole elements of this singular example of yaws; and it is the singularity of this particular example, plus the rarity of the affection itself, which has prompted this report.

On the left side of the upper lip there was a cone-shaped lesion about 5 mm. high and 7 mm. in diameter. There was no sign of inflammation about this structure and it was supposed to be about ten days old. To the eye alone, it appeared a dull, dirty-white, symmetrical, homogeneous, round-topped, horn-like cone; to the touch, a purely superficial and moderately hard tumor.

Over the metacarpo-phalangeal joint of the right thumb was found the largest of all the lesions, dating back thirty days since its original appearance. This was an irregular parallelogram with rounded corners, approximately 2 cm. by 1½ cm., and on three sides raised about 5 mm. above the surface, while the fourth sloped gradually down to the normal level of the skin. It was an extraordinary looking figure from a dermatological point of view. The whole structure was firm and decidedly solid; it was freely movable and seemed to be an outgrowth from the skin rather than a tumor of the corium. Its top was flattish but broken up by crevasses into an irregular, dirty-white, dry, hard surface. Its sides were like a perpendicular

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

wall, yellow and glistening (Fig. 1), and the whole mass might be likened to some mesa of larval formation.

A smaller, more circular, but otherwise similar lesion was situated over the second phalangeal joint of the right ring finger and appeared as though its top had been cut off like some truncated cone. And finally, a fourth projection, quite similar to the last, was found on the extensor surface of the left forearm just below the elbow, and this lesion was excised for examination. This was the oldest lesion of all and dated back two months.

General physical examination showed a weight of 127 pounds, which had increased to 130 pounds when the man left the hospital. For the first two weeks the temperature ranged about 97° F., averaged one degree lower during the second fortnight and then rose to normal for the rest of the patient's visit. A Wassermann test for syphilis was negative. There was general and marked glandular enlargement and the epitrochlear glands were oval, hard, movable, and nearly 5 cm. in their long diameter. The blood examination showed the following percentages: polymorphonuclears 70%, eosinophiles 8%, small lymphocytes 18% and large lymphocytes 4%. The urine was yellow and alkaline, had a specific gravity of 1018 and contained neither albumin nor sugar. The thoracic and abdominal viscera were apparently normal and the man seemed well but rather apathetic, perhaps a racial characteristic.

September 27th. The left epitrochlear gland was excised and examined by Dr. Oscar Richardson, pathologist to the hospital, who reported the finding of a few very delicate spirochætæ.

October 1st. The tumors, if changed at all, seemed somewhat larger. The administration of ten grains of iodide of potash three times daily was begun and continued until the end, and, with the exception of a little iron, constituted the sole medication in this case while under observation.

October 8th. During the day the patient picked off a part of the top of the thumb lesion and revealed a dry, uneven, rather verrucous, elevated, dome-shaped, underlying tissue the color of the normal skin. The remaining portions were forcibly removed the following day by one of the staff who noted a similar verrucous surface dotted here and there with bleeding points. Neither the removal of this overlying structure nor the application of 5 per cent. acetic acid caused the man the slightest evident pain.

October 16th. The lesion on the right ring finger had diminished perceptibly, leaving a pinkish skin.



October 23rd. The above lesion was now practically gone while the mass on the thumb had increased in extent but decreased in elevation.

November 6th. A piece of one of the lesions was excised and placed in the anterior chamber of several rabbits' eyes by Dr. Richardson, but the results were entirely negative. The thumb lesions had flattened still more.

November 20th. Dr. Tyzzer excised the cicatricial remains of the lesion from the arm which was first cut away in September, and the results of his inoculations into monkeys will constitute the second part of this paper.

November 26th. The man left the hospital at his urgent request. There was nothing visible remaining of his disease except a flat and slightly verrucous surface marking the site of the thumb lesion.

This is the whole story from a clinical point of view and one may well ask our diagnosis. Recapitulated in a few words, we had presented to us a picture of a disease absolutely new to our eyes, consisting of four strange-looking, elevated, dry, tumor masses unaccompanied by any signs of local or general inflammation or disturbance. The possibilities were syphilis, blastomycosis, tuberculosis verrucosa, and verruca, or some rare tropical dermatosis such as frambœsia, verruga peruana or perhaps a tinea. For obvious reasons our dermatological staff rejected all diagnoses save the tropical ones and called into consultation Dr. George C. Shattuck, who had recently returned from a somewhat protracted visit in the East. He said that the skin lesion on the lip suggested yaws but that a yaw should be covered by a crust of serum and not by a horny growth.

Although yaws was our probable diagnosis we were forced to admit that this present case was in no way typical of this disease either locally or systemically. We therefore felt obliged to call in the assistance of pathology and animal experimentation with the result that Dr. Richardson found a small and infrequent spirochæta which corresponded sufficiently with Castellani's spirochæta pertenue, and Dr. Tyzzer was successful in reproducing the disease in monkeys, as will be seen in his valuable subjoined report.

#### HISTOPATHOLOGY.

##### THE GLAND.

Under the microscope the glandular structure presents no marked changes save for the increased amount of blood in all parts

of the gland structure. Even in the follicles the vessels appear engorged with blood. There is only an occasional leucocyte, but the erythrocytes absolutely choke the vessel lumen, while the endothelial cells show a slight vesiculation of their nuclei.

#### THE ORGANISM IN THE SKIN.

Stained by the Levaditi method the organisms can be seen as densely colored spirals. They are not numerous but appear occasionally and singly in field to field, except in one area where eleven were counted at once. They vary from almost straight figures to hemicircles, but these latter types are rare. They are not as long as the *spirochæta pallida* and their convolutions are sharp and short, and with a magnification of one thousand diameters are very difficult to count, but vary as near as can be ascertained in these sections from eight to twelve in number (Figs. 2, 3, and 6). They are found invariably in the interstitial tissue and never in these sections in the cellular elements of the skin.

#### THE SKIN.

The lesion from the arm was excised, hardened in alcohol, imbedded in paraffin and stained in various ways.

Seen with the low power the tissue consists in a few words, of a marked acanthosis and parakeratosis and of a cellular infiltration, solid in the upper half of the corium and focal in the lower (Fig. 4).

Studied with the oil immersion lens the following details appear:

**EPIDERMIS:** There is a marked increase in the depth of the rete and this hypertrophy is due to the depth and width of the inter-papillary downgrowth. The supra-papillary layers, on the other hand, remain distinctly insignificant. The palisade layer is normal in a large measure. The columnar cells are fairly regular, often pigmented, and form in most areas a sharp and definite boundary between epidermis and corium. The nuclei are oval and large and contain one or two nucleoli in addition to numerous smaller chromatin bodies. There are, however, stretches where these normal characteristics are lacking. There are, for instance, spaces where the cellular invasions of the corium touch the rete and break up its proper continuity. There are also palisade cells which show shrunken nuclei and diminished hyaloplasm.

Above the palisade layer pathological conditions at once manifest themselves. The centres of the numerous peninsula-like downgrowths present cells which have, to a large extent, preserved their prickly boundaries but from which all vestiges of their nuclei have

vanished. Or, there are relatively large tracts from which all cellular outlines have disappeared, leaving only an occasional nucleus visible. These nuclei are large and vesicular, and usually float in a hollow space quite independent of the surrounding cellular tissue. Or, again, there are areas of still greater degeneration where only cell envelopes or cellular threads persist, leaving vacuoles in which float small basic-staining bodies, often in twos and threes—probably mono- or polynuclear leucocytes. Throughout this layer mitoses are conspicuous by their absence.

Over these varying areas of rete two types of superficial epidermis present themselves—the one composed of ten or more strata of vague, almost circular, granular cells topped by hyperplastic, swollen, almost homogeneous, sometimes nucleated horny cells; and the other utterly devoid of any stratum granulosum and surmounted by a thick, dense stratum corneum containing large masses of mononuclear leucocytes. As might be supposed, the latter type forms the roof of the more abnormal, almost colliquative areas of the subjacent rete.

In addition to the more pathological areas of the epidermis there are comparatively long stretches where, apart from the marked acanthosis which is universal, the epidermis as a whole is practically sound and differentiates itself into its normal composition of prickle, granular and a-nucleated horny cells.

**CORIUM:** The papillary layer is very conspicuous and consists of long indentations into the epidermis, sometimes broad, but oftener narrow. The connective tissue is a fine, open meshwork supporting dilated vessels and a moderate leucocytic infiltration. The vascular walls are delicate but present prominent, very vesicular nuclei, while their lumina contain abundant polynuclear leucocytes. The infiltration is distinctly marked, though rather less rich than immediately below, and consists almost exclusively of lymphocytes.

The subpapillary layer down to the mid-strata of the corium presents almost the same picture of a delicate fibrous stroma supporting moderately dilated, but otherwise normal vessels and a marked monoleucocytic infiltration—in other words a typical granuloma. The purity of this cellular invasion—its freedom from giant, epithelioid and plasma cells—is striking and conclusive in its diagnostic bearing. Sweat and sebaceous ducts and glands, though rare, appear unaffected by this cellular out-pouring.

In the lower levels of the corium the aberrant lymphocytes appear focally, either in longitudinal, elongated, intercollagenous

groups or less abundantly around the deeper hair follicles, sebaceous or sweat glands, or occasional, large dilated vessel. In these lower levels the collagen has retained its normal density and abundance and does not seem elementally affected by the cellular invasion. Mitoses and cellular fragmentation are not evident. The elastic tissue conforms to the usual rule in granulomata. There is no evidence of elacin, but within the confines of the cellulomata elastin has completely disappeared save for a few vestiges of poorly staining granules or short, swollen strands. Below the cellular masses elastin resumes a fairly normal aspect, although never abundant or deeply stained.

Iodine and acid-fast bacteria are absent, but in the colliquative areas of the rete methylene blue-staining cocci are noted.

From the above pathological details we may summarize the nodule as composed of a typical granuloma topped by a markedly acanthotic and hyperkeratotic or moderately parakeratotic epidermis. Diagnostically, we can see at a glance that whatever our clinical doubts, histologically we are not dealing here with blastomycosis, tuberculosis, leprosy or syphilis—the distinct absence in the corium of focal abscesses, tubercles, and necrosis plus the non-appearance of epithelioid, giant, plasma and leprous cells and the persistence of comparatively normal vessels absolutely excluding these pathological processes. On the other hand the clinical appearances, though decidedly uncommon and inconclusive, and the discovery in the gland by Dr. Richardson of a delicate spirochæta, compatible with Castellani's spirochæta pertenuis, tend to confirm our diagnosis that we are dealing with a true example of frambæsia or yaws.

Nevertheless, compared with the investigations of other dermatologists, notably Unna and MacLeod, we note several pathological anomalies in the present instance. The first and most striking is the nature of the cellular invasions, which have been described heretofore as mildly plasmomatic; while the second deviation in the present case lies in the appearance of foci of cells about the hair follicles, sebaceous and sweat glands and around the deeper vessels, conditions not observed in previous reports.

## INOCULATION EXPERIMENTS.

By E. E. TYZZER, M.D.

A lesion was excised from the arm of the patient on November 20, 1909, and the greater part of it was used to inoculate a monkey of the species *Macacus cynomologous*. The lesion was situated on the posterior aspect of the arm a short distance below the elbow, and consisted of a rounded nodule of the consistency of scar tissue. The outer surface of the nodule presented an area of granulation tissue with thin epithelium extending in from its periphery. It was subsequently learned that a lesion had been previously excised from the same situation.

The monkey was inoculated by rubbing scrapings of the excised human lesion into shallow incisions on the eyebrows and abdomen. A small bit of the tissue was also inserted beneath the skin over the breast by means of a trochar. There were in all about twenty shallow incisions made on the belly. All including those on the brows healed like simple incisions. The bit of tissue implanted beneath the skin could be distinctly felt for the next fortnight, but caused no discernible swelling or inflammatory reaction.

A slight reddening and elevation of the surface was noted at the site of inoculation on each eyebrow sixteen days after the inoculation. The lesions developed slowly, and five days later they appeared as definite, elongated, pinkish papules (Fig. 5). One of these papules was pricked with a needle, and delicate spirochæte were demonstrated in smears of the serum stained with Wright's blood stain. Subsequently the lesions were capped with translucent, yellowish crusts of dried serum, which increased gradually in thickness and extent. The skin at the edges of the crusts was slightly reddened and its surface elevated. The crusts occasionally became loosened, and were several times scratched off, leaving a moist, pinkish, and somewhat uneven surface. With the extension of the process and the occasional loosening of the crusts, the lesion a month later presented an annular form. There was at this time a ring of dry, hard crust. It was distinctly warty in its appearance and in places projected at least two millimetres from the surrounding surface of the skin. It was no longer translucent, but appeared dull gray. Within this ring of crust the skin had healed, but was wholly devoid of pigment. The lesions continued to extend peripherally, in the meantime healing from the centre outward. The process became, however, more and



more superficial and in place of the well-defined, warty ring the border of the lesion showed merely a thickening of the skin with more or less hyperkeratosis. The process ultimately extended upward well over the supra-orbital ridges and downward over the eyelids stopping at the angles of the eyes. The active process extended over a period of seven weeks. The involved areas have remained devoid of pigment until the present time—five months after the inoculation.

An attempt was made to inoculate other parts of the animal about the head with material from the primary lesions on the brows. This was done ten days after the latter lesion appeared. Scarifications behind the ears showed slight superficial reddening and scaliness of the skin, but no characteristic lesions developed. There appeared early in the course of the disease a lesion a short distance from the outer angle of the left eye. This resembled the lesions on the brows and probably developed from an early transference of the virus by the animal itself. No reaction occurred about the numerous points of inoculation on the abdomen or about the bit of tissue implanted in the breast.

This monkey presented no constitutional symptoms attributable to the lesions on the brows, and, apart from an occasional intercurrent acute infection, he has been in good health and has gained considerable weight.

The spirochætæ found in this case (Fig. 6), varied considerably in length, but most commonly measured from 7 to 15 microns in length. The average length of each turn of the spiral was slightly over .9 of a micron. They appeared to be rather more slender than the spirochæta pallida with which they were compared. They taper distinctly towards both extremities.

Two *Macacus rhesus* monkeys were inoculated in a similar manner with scrapings from the lesions of the first monkey. On account of difficulty in obtaining monkeys at this time of the year, these inoculations were delayed so that the material obtained from the lesions of the first monkey was probably inactive, being taken forty-four days after the first appearance of the process. A slight reddening along the lines of incision on the brows was noted in both the *Rhesus* monkeys three weeks after the inoculation, but neither of them developed lesions.

#### INOCULATIONS OF RABBITS.

The corneas of ten rabbits were inoculated with material taken from the lesions of the first monkey on the tenth day of the disease.

The incisions on the corneas healed like simple incisions, and none at any time showed any macroscopic reaction. The animals were killed at intervals ranging from two to four days, and the corneas impregnated with silver by the Levaditi method. The corneas of two presented a few organisms in the connective tissue near the point of incision. These organisms were thick and only slightly wavy. They were wholly unlike the organisms found in the lesion of the monkey, and probably represented the invasion of the incision by some extraneous organism.

From the results of these experiments it is apparent that the disease which occurred in the human being was reproduced in the monkey. This disease was characterized by lesions which appeared at the sites of inoculation on the brows after a period of incubation of sixteen days.

The lesions were quite superficial; at first appearing as papules, they soon became crusted. The crusts, at first consisting of dried serum, were yellowish and translucent. Later in the disease the active portion of the lesions was covered by dull-grayish material which protruded from the surface giving it a warty appearance. The process healed from the centre, giving the lesions an annular form, and the area which had been involved was left without pigment. The entire course of the disease lasted about seven weeks.

These results obtained from this monkey are quite consistent with those of Castellani and others in the experimental production of yaws or frambœsia in monkeys. It was especially desirable in this case to inoculate the monkey with syphilitic material after it had recovered from the disease produced, so as to determine whether it was now immune to syphilis. This has been delayed on account of a recent enlargement of the axillary and inguinal lymph nodes. It was thought for a time that this was a manifestation of yaws, but no spirochætæ were demonstrable in the excised lymph nodes and a small bacillus has since been found which probably accounts for this condition.



FIG. 1.  
Frambæsia.  
Large lesion on thumb. Note unusual dry appearance of the top.

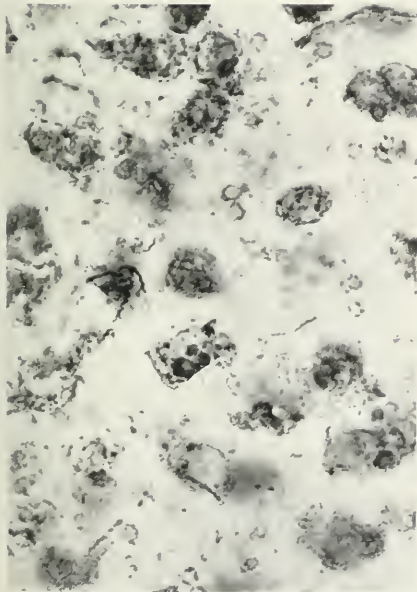


FIG. 2.  
Frambæsia.  
Spirochaetæ in section of an epitrochlear gland stained by the Levaditi method.

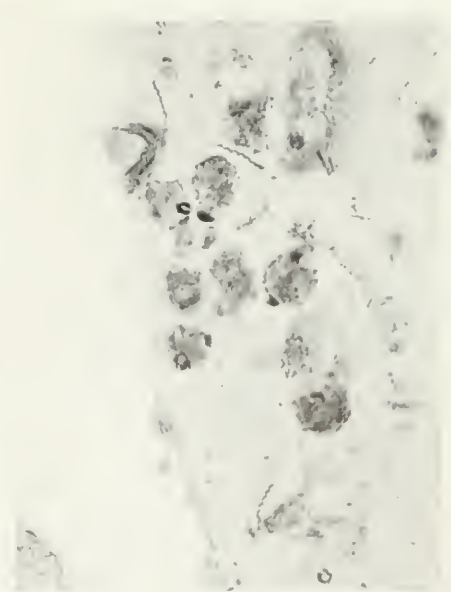


FIG. 3.  
Frambæsia.  
Same as Fig. 2.





FIG. 4. Framboesia.  
Low power view of the upper corium and epidermis.



FIG. 5. Framboesia.  
Lesions on the eyebrows nine days old.



FIG. 6. Framboesia.  
Spirochaete found in the lesions of the monkey and  
stained by Wright's method.





## MYCOSIS FUNGOIDES IN THE NEGRO.

By E. R. STROBEL, M.D., Baltimore, Md.,

Professor of Dermatology, Baltimore Medical College; Instructor in Dermatology,  
Johns Hopkins Medical School,  
and

H. H. HAZEN, M.D., Washington, D.C.,

Clinical Professor of Dermatology, Howard Medical School; Externe in Dermatology, Johns Hopkins Hospital.

WITH the numerous cases of mycosis fungoides upon record it would seem almost an impertinence to report others.

However, there are a number of reasons which make it desirable to record these two. In an elaborate study of skin diseases occurring in the negro, Howard Fox found only one case of mycosis in that race. Upon tracing out that case we have found that Dr. Fox was misled by an incorrect diagnosis. In a careful study of the recent literature we have failed to find any other cases. Our cases are of interest then because, first, the disease occurred in negroes, one of whom was full-blooded; secondly, because we have found pathological changes in the macroscopically normal skin, and thirdly, for the purposes of comparison between the clinical and histological features of this malady and the infectious granulomata, sarcomata, and the various lymphoid and myeloid diseases.

For the privilege of reporting the first case we are indebted to Dr. J. C. Bloodgood, who has previously referred to the case, and given excellent illustrations in *Progressive Medicine*. We are indebted to Dr. T. C. Gilchrist for constant help and suggestions.

CASE I. A mulatto woman, fifty-one years of age, entered the surgical service of the Johns Hopkins Hospital in 1900, complaining of sores upon her body. Her family and past histories were unimportant. About seven months before, she had noticed upon her trunk a number of eczematous patches that itched intensely. Most of these had spread, though a few had healed, and upon the spreading areas small tumor masses appeared within four months of the onset. Examination showed the lesions to be practically confined to the body.

There were present areas of desquamating eczema; other areas of eczema which had beneath them a deep subcutaneous infiltration;

tumors of various sizes, some of which were covered by epithelium, and some of which were denuded and fungating. There was also scar formation, caused by the spontaneous healing of diseased areas. With the exception of the skin condition nothing abnormal was noted. There was no glandular enlargement. A blood examination was not made. The diagnosis was first made by Dr. Osler, and treatment consisted of surgical dressings. Coley's serum was also used, but with no appreciable results.

The woman was under observation for two years and finally died from marasmus. During this time the disease spread steadily, chiefly to the buttocks and legs, which just before death were almost entirely converted into large granulating fungous areas. The face and arms remained almost free. No autopsy could be obtained.

Microscopical examination of the tissue obtained from the tumors showed a preponderance of small round cells, which resembled those of lymphosarcoma. It was also noted that there were other tissue changes which more resembled chronic inflammation. Unfortunately we have not been able to obtain slides from this case for examination.

CASE II. The patient was a negro, thirty years of age and single, and had been a waiter on a dining car. The family and past histories were unimportant with the exception that fifteen years ago he had had multiple sores upon his penis, which had not been followed by secondary manifestations. He entered the Maryland General Hospital in March, 1907. He stated that one year previously he had noticed several small "pimples" upon his forehead. These were discrete and itched considerably; later they coalesced to form a thick crusted patch, which gradually enlarged until it became about six centimetres in diameter. About two months after the first eruption appeared, similar "pimples" developed on the nose and chin and ran a like course. Lesions then gradually appeared upon the neck, hands, arms, and legs, and last of all upon the body.

The following notes were then made: "The patient is a large, well-developed negro, apparently with no admixture of white blood. The primary lesion is a papule, from 1 to 3 mm. in diameter, usually seated at a follicular opening, and often with either a normal or broken hair piercing the centre; occasionally the papule has a conical opening, probably glandular. The papules are not scaly; the lack of redness may be due to the blackness of the skin. They are generally distributed but are especially numerous on the neck and back. As they become more and more aggregated they gradually

lose their individuality, and coalesce to form scaly, variously sized and shaped, markedly infiltrated patches with fairly well-defined edges, and covered with dense scales which are very adherent. On the side and front of the trunk there is a very unusual eruption, consisting of numerous, sharply defined, round or oval, infiltrated, discoid areas, from 2 to 8 cm. in diameter, and slightly elevated. They are mostly discrete, but some have coalesced to form figures of an irregular shape. They resemble to a marked degree the discs of erythema multiforme exudativum, except that they are scaly. There is no tendency to clear up in the centre. According to the patient they erupted as such, and did not develop from any of the above-described lesions, though they are intermingled with all of the other types of lesions. There are about 30 tumors, none of which is larger than a hen's egg. They appear chiefly upon the face, hands, and thighs. Each commences as a single nodule, but in a number of places several have coalesced to form irregular, lobulated masses. The individual nodules have round or oval bases, and some of the larger ones are pedunculated. The skin covering the smaller ones is thin; that covering the larger ones has scales and crusts. While under some of the crusts there is a slightly hypertrophic granulation, at no place can there be said to be a fungiform growth. A few tumors can be seen springing from the discoid areas above described. The limbs are considerably swollen and very tender. The skin covering the entire body is thickened and shows an accentuation of the normal creases; that covering the limbs shows crusted and weeping areas. The patient thinks that none of the eruption has disappeared and that progress has been steady though slow. Itching and burning are bitterly complained of, and the large lesions are rather tender. The patient has lost about 30 pounds in weight and considerable strength."

The red blood count showed 3,000,000 red cells; the hæmoglobin was 50%, thus giving a color index of .84. There were 9,700 leucocytes. The urine was negative except for a small amount of albumin. The temperature varied from 97.4° to 100.4° and was usually higher in the morning.

The patient was in the hospital for about five months. A mild salicylic and zinc oxide ointment gave him considerable comfort. Under X-ray treatment carried to the point of a moderate burn most of the tumors and discoid areas disappeared. Against advice the patient left the hospital, and could not again be located. It was later learned that he had died at his home in Virginia seven months.

after leaving the hospital, thus making the duration of the disease about two years.

In our case of *mycosis fungoides* there were four distinct lesions: the papules, the patches, the discs, and the tumors.

(1) One of the papules with a small area of apparently normal skin was excised. The apparently unaffected skin showed interesting pathological changes. There was considerable intercellular œdema of the lower part of the rete. The papillæ were œdematous but contained no increase in cells. The subpapillary portion of the corium was markedly œdematous, and was infiltrated with the lymphoid cells that are characteristic of the disease. These cells were very numerous and did not lie in pockets in the connective tissue. At the lower portion of the infiltration, which was very sharply defined, the cells were much more closely crowded together. There was no evidence of any attempt on the part of the body to wall them off. In the deeper portions of the corium the blood and lymph vessels were somewhat dilated, and they, as well as the sweat ducts, were surrounded by lymphoid cells. The typical cell was the small round cell or lymphocyte. One or two large epithelioid cells were also noted. A section of apparently normal skin adjoining one of the tumors showed analogous changes with the exception that the infiltration was not so dense. In the study of this section it could be apparently made out that the infiltration began in the middle portion of the corium, and secondarily made its appearance just beneath the rete. These deductions were made because wherever there was infiltration of the subpapillary portion of the corium there was also infiltration around the deeper vessels, but that in several instances where there was deep infiltration the superficial infiltration was lacking. Also, lymphocytes could be found apparently migrating upward.

In the papule proper there was marked intercellular œdema of the rete and of the greater part of the corium. The characteristic cells lay in pockets in the connective tissue and were closely packed. The whole subpapillary portion of the corium was filled with them, and they also extended in long finger-like downgrowths almost to the subcutaneous fat. Some cells had multiple nuclei; there were no giant cells, no eosinophiles, no polymorphonuclears, and but few plasma cells. Two or three of the cells had wandered into the rete, but there was no infiltration of it in bulk, nor was it broken through.

(2) Sections from one of the patches showed that both the horny layer and the rete were thinned, and that there was considerable œdema of the latter, and the interpapillary processes were thin-



ner than normal. The infiltration of lymphoid cells extended down deep in the corium, and was especially marked near the sebaceous glands, as well as near the origin of the arrectores pili muscles, and between the fibres. The follicles were widely opened, and the blood vessels dilated. As shown by the Mallory stain the elastic fibres were unchanged.

(3) Sections from one of the tumors showed that the horny layer was thickened and œdematous. The rete was thinned, and œdematous, and the interpapillary processes were much elongated. The mouths of the follicles were widened, and the walls showed marked hyperkeratosis. The tumor mass consisted of closely packed lymphoid, and in some places plasma cells, lying in pockets of connective tissue and extending down to the subcutaneous fat. The cellular infiltration was most noticeable around the sweat ducts. Many of the lymphoid cells were fragmented. The fibrous tissue of the corium was œdematous. Both blood and lymph vessels were dilated. There was a diminution and clumping of the elastic tissue. Some of the follicles showed traces of secondary infection, for beneath the keratin there were masses of polymorphonuclears, many of which were fragmented. In the horny layer there were also collections of broken-down polymorphonuclears. Toward the lower portion of the tumor mass the infiltration was not solid but proceeded downward and outward in finger-like processes, and in some places as separate clumps.

The typical mycosis fungoides cell was round or oval, from 8 to 12 microns in diameter, and contained an eccentric nucleus that was often rich in mitotic figures. The cell was typically lymphoid and could not be distinguished from those seen in the spleen and lymph glands. All stages of these cells were found apparently grading up to the typical plasma cell, and from the plasma cell up to the large epithelioid cell above mentioned. These latter closely resembled the cells seen in multiple myeloma, with the single exception that they were somewhat smaller. There were a few multinucleated cells but no giant cells.

There are three leading views as to where mycosis fungoides should be classified: some think that it is a form of sarcoma, some that it is an infectious granuloma, and still others that it is a lymphoma.

I. With reference to the first view, in our case the cells certainly do not infiltrate or metastasize in the way that sarcoma cells do. Then, too, the development from papules and plaques, and the

tendency to sudden changes in the character of the eruption speak strongly against sarcoma. We have examined over twenty sections of sarcoma of the skin, some having their origin in pigmented moles, some being primary malignant whitlows, and some originating in old scars, and have found that there was a tendency for the cells to arrange themselves in lines, which is totally different from that in mycosis. And lastly, sarcomata are not so prone to secondary infection.

II. Nor do we believe that mycosis fungoides is an infectious granuloma for the following reasons:

(1) Because all of the cells are of one type, or can be directly traced from one type. In none of the infectious granuloma with which we are acquainted is there but one cell type for multiform lesions.

(2) Because of the richness of mitoses in mycosis fungoides.

(3) Because of the fact that mycosis fungoides is usually confined entirely to the skin. In the cases reported by Bowen, Brandweiner, Crull, Hallopeau and Jeanselme, Kaposi, Malherbe and Monier, Leredde and Weil, Lenoble, Mühsam, Paltauf, Riecke, Roman, and Pardee and Zeit, there were lesions in various of the internal organs, often, however, in such positions as to suggest that preëxisting lymphoid tissue might have been the seat of proliferation. A number of other cases have been reported, but without microscopical examination. In most of the infectious granulomata, when they have become very extensive, there are marked internal lesions.

(4) Because there is very little invasion of the rete by the predominating cell in mycosis.

(5) Because there is no attempt at walling in of the masses of tumor cells by other cells or by fibrous tissue in mycosis, as is usual in the infectious granulomata.

(6) Because the clinical course and termination of mycosis are totally different from that of the granulomata.

(7) Because there is no special geographical centre for mycosis as is so often the case with the granulomata.

(8) Because there is absolutely no history of contagion or of inoculation. The comparative tables will bring out many of these points very strongly.

(9) The pathology of the infectious granulomata differs very materially from that of mycosis fungoides. Adami says: "The complete early tubercle shows a central giant cell, surrounded by collec-

tions of larger, more hyaline epithelial cells, and a certain number of interspersed lymphocytes—the typical small round cells of subacute and chronic inflammation, or less frequently of polymorphonuclear leucocytes. . . . As the bacilli continue to propagate the area of cells destroyed increases, and we gain a larger and larger central area of necrosis of that type known as caseation. The affected cells completely lose their power of staining. . . . These give rise to yet other tubercles so that eventually a gross conglomerate mass of tubercles with a central area of caseation becomes developed. Such a mass may rupture. . . . or we may obtain the formation of a well-marked connective tissue capsule surrounding the growth.” Or there may be complete fibrosis or calcification, or rarely complete absorption.

To further quote Adami: “With variation rather in detail than in principal the description applies to the other infective granulomata. In syphilis the giant cells are not as frequent, and the necrosed area becomes gummy rather than caseous. In actinomycosis the tendency is for the necrosis to be of a more suppurative type, leucocytes making their way into the dead area, and causing dissolution. Still more marked liquefaction is seen in chronic glanders.”

We have examined many sections of the above diseases, and of leprosy as well, and not one of them resembles in character the lesions of mycosis. So far as we have been able to find, no one has ever been able to discover a mycosis nodule that has become either fibrous or calcified. Mycosis tumors may break down, never from necrosis of the innermost portion, but rather from secondary infection, or from the natural thinning of the epidermis over a tumor mass. No one has ever reported any attempt on the part of the body to wall in the lesions of mycosis fungoides: in fact there is no evidence to show that the body is making any attempt to resist this disease in the way that it resists the infectious granulomata.

III. With reference to the third view that mycosis belongs to the lymphomata, Warthin, who has had a large experience with lymphomatous growths, gives the following suggestive classification:

(1) Symmetrical enlargement of the lachrymal or salivary glands (Mikulicz's disease).

(2) Mediastinal lymphocytoma.

(3) Lymphocytoma of the stomach and intestines and mesenteric glands.

(4) Retroperitoneal lymphocytoma.

(5) Cervical or axillary lymphocytoma.

(6) Lymphocytoma of pharynx.

(7) Lymphocytoma of skin (mycosis fungoides).

Adami compares myeloma and lymphoma and gives the following classification:

Myeloma:

Giant cell myeloma;

Multiple myeloma;

Myeloid leukæmia;

Chloroma.

Lymphoma:

Chronic hyperplasia;

Hodgkin's disease;

Lymphatic leukæmia;

Typical lymphoma;

Atypical lymphoma or lymphosarcoma;

Lymphosarcomatosis;

Splenomegaly or splenic anæmia.

In many ways mycosis fungoides bears a remarkable resemblance to most of these diseases. Although the table will point out many of these similarities it seems wise to go into some of them more in detail.

In MULTIPLE MYELOMA a number of tumors appear about the same time, and are definitely confined, in the typical cases, to one set of organs, namely, the bones. These tumors are not malignant in the ordinary sense of the word, and yet the patient slowly but surely sinks, there is some fever and anæmia, and in from two to five years the patient always dies. The accompanying plates will show how closely similar is the cell type in the two diseases. The size of the cell in multiple myeloma is subject to wide variations, and in the specimen from which our photomicrographs were made is rather larger than usual. According to Christian the size is 8 to 11.4 microns. His article gives an excellent study of the cell type in myeloma and is accompanied by splendid plates.

In HODGKIN'S DISEASE the glands are enlarged and discrete, and the capsule is frequently invaded. In the early stages there is hyperplasia of the lymphoid cells with active proliferation at the germinal centres of the lymphoid follicles. The reticulum is increased. Although the lymphoid cells predominate there are also found large lymphocytes, epithelioid cells, plasma cells, mast cells, and in some cases eosinophiles in great numbers. A little later mononuclear and multinuclear giant cells appear. Still later the gland becomes entirely fibrosed. It will thus be seen that the above type of Hodgkin's

disease, as described by Reed, Longcope, and others is essentially different from mycosis fungoides, especially if one regards the epithelioid and giant cells as being the really essential characteristics of true Hodgkin's disease. Warthin calls attention to the fact that in about two-thirds of the cases diagnosed as Hodgkin's disease these cells are lacking. It seems to us that the essential pathological picture is the lymphoid proliferation and that the other cell types constitute merely an unimportant variation. Our views regarding the relationship of mycosis fungoides to Hodgkin's disease are supported by a personal communication from Dr. James Homer Wright, who says: "I can see no essential difference between the more or less atypical lymph-adenoid tissue constituting the tumor-like tissue of mycosis fungoides and the tissue of certain tumor-like formations occurring in a great variety of situations and among which are classed certain cases of so-called Hodgkin's disease."

In SPLENIC ANEMIA the spleen shows a general hyperplastic fibrosis of varying degree, involving the capsule, the reticulum of the pulp, and especially the Malpighian bodies. The characteristic lymphoid infiltration of Hodgkin's disease is never found. However, in the three cases that we have examined the histological picture is similar to the fibrosed gland of advanced Hodgkin's disease.

In LYMPHOID LEUKEMIA there is an excess of leukoblastic tissue in the marrow which causes much of the anæmia by simple displacement of the parent red blood cells. The glands and the spleen show an over-development of the typical lymphoid tissue, the different constituents being increased in the same proportion. The liver and skin frequently show nodules which have this same structure. Cabot remarks: "The leukæmic process can start wherever in the body leukoblastic tissue is present; it may penetrate and invade the tissues." It is questionable whether these nodules are infiltrations or whether they arise from preëxisting lymphoid tissue. The cells are, of course, the lymphoid cells as normally occur in the glands.

In MYELOID LEUKEMIA there is a diffuse overgrowth of the bone marrow with an abundant discharge of the cells into the circulation. The main elements seen are the myelocytes. The spleen is secondarily involved from an accumulation of the blood cells. The liver and kidneys may contain leukæmic tumors due to the active growth of myelocytes outside of the capillaries. There is but one case on record where the skin was involved in such a process.

Dock has pointed out that the tumors of CHLOROMA consist of a lymphoid overgrowth with a well-marked reticulum in which lie lym-



phoid cells. Leukæmia of some type is always present. The general opinion is that chloroma is a more malignant form of leukæmia. A bacillus has recently been isolated by Pope and Reynolds from the lesions. They think that this may have some causal connection, though it may do no more than produce the characteristic green color.

The lesions of MIKULICZ'S DISEASE are lymphoid. There is the characteristic lymphoid infiltration, and in the early stages there may be eosinophiles and occasionally giant cells. Leukæmia is present at times.

Thus it will be seen that in all of the diseases classified together by Adami, with the exception of splenic anæmia, there is an overdevelopment of myeloid or lymphoid tissue, the general structure of each of which is similar to mycosis fungoides. Each type may make more or less wide variations from the usual pathological picture, but the general characteristics are the same. Of course the stroma is profoundly influenced by the character of the stroma present in the organ which happens to be involved.

When one studies the atypical cases he should see how one of these conditions passes into another until it is often very difficult to make a definite diagnosis, either clinically or with the microscope. Adami states: "It is frequently impossible to draw a hard and fast line between what are merely compensatory or inflammatory hyperplasia and true tumor formation. Under the name of lymphadenia or progressive hyperplasia of the lymph glands we may include a number of allied conditions in which there is an increase in the lymphoid and other elements of the glands. . . . This includes chronic hyperplasia, Hodgkin's disease, leukæmia, typical or benign lymphoma, atypical or malignant lymphoma (lymphosarcoma) . . . nor even yet is their pathogeny fully understood. . . . Certain other cases of tuberculosis without caseation resemble Hodgkin's disease very closely."

MacCallum has shown how cases of Hodgkin's disease and lymphosarcoma differ, and Gibbons has shown how they are related, while Warthin says that many cases of so-called Hodgkin's disease are in reality lymphoma, and do not show the typical histological picture described by Reed. Symmers has recently described a case of primary Hodgkin's disease of the spleen, though many other authors deny that such a condition ever exists. All clinicians are agreed that there is no hard and fast line between acute and chronic lymphoid leukæmia, and one type of leukæmia may change into another. In rare instances tuberculosis of the lymphatic glands may cause a lymphocytosis, so

marked as to resemble lymphoid leukæmia. In fact some writers think that leukæmia is not a disease but a symptom. Chloroma is a more malignant type of leukæmia, and yet is related to multiple myeloma. Cabot states: "I think that we must conclude that there are transitions from ordinary sarcoma through Sternberg's leukosarcoma, and through myeloma to leukæmia of the ordinary type." Bushnell lends some confirmation to this view.

Referring to Mikulicz's disease, Howard states that it is not a simple disease, but a clinical syndrome, which varies according to its form, its ætiology, and its course, that under this term we must accept isolated as well as symmetrical disease of the lachrymal and salivary glands, due to simple lymphoma, pseudoleukæmia (Hodgkin's disease), to tuberculosis and to syphilis, and that a whole chain of links exists from isolated lymphoma to complete involvement of the glands with simultaneous disease of the lymphatic and hæmatopoietic apparatus.

Adami states that there are three varieties of multiple myeloma, first, in which the condition develops into true sarcoma, secondly, where lymphoblastic and myeloblastic tissue in other parts of the body are affected, and thirdly, where there is osteosclerosis.

All dermatologists agree that it is occasionally practically impossible to tell the difference between the "tumeurs d'emblée" and multiple sarcoma on the one hand, and between mycosis and leukæmia cutis on the other, a point which has been brought out in the writings of Fordyce, Kaposi, and Stelwagon. Several observers have reported cases in which leukæmia and mycosis were associated. However, none of these cases were typical cases of leukæmia. Recently, however, Pardee and Zeit have reported a case in which there was a terminal lymphatic leukæmia. We have collected a large number of leucocyte counts made in the course of this disease, and find that the majority of them show a marked increase in the percentage of the large mononuclear cells. Many also show an eosinophilia. There are a number of instances of very high counts, and in almost all instances there is some increase.

Many autopsies show that there is involvement of the lymphatic apparatus. In one case Paltauf found infiltration of the tonsils, palate, and upper half of the larynx, general glandular enlargement, infiltration of the liver, spleen, and testicles, and changes in the medulla of the long bones. Hallopeau and Jeanselme found tumors in the palate, larynx, spleen, liver, and kidneys, and in the axillary and inguinal glands; Kaposi has found nodules in the medulla of the femur,

and in the liver, spleen, and kidneys, and throughout the mucous membrane of the stomach and intestines. Many others, among them Leredde and Weil, have reported involvement of the lymphatic glands. In Pardee and Zeit's case there was "lymphatic leukæmia with marked hyperplasia of the spleen, cervical, axillary, inguinal, mediastinal bronchial, celiac, mesenteric and retroperitoneal lymph nodes, and leukæmic lymphoma of the lungs, skin, liver, spleen, and intestines." There were also changes in the marrow.

In our judgment there are now upon record a sufficient number of autopsies to prove conclusively that in the majority of all cases there is disease not only of the lymphatic apparatus but of the medulla of the long bones as well. This last lesion should be more carefully searched for in all future autopsies, for in the past it has been much neglected. The autopsy findings very strongly support the theory that mycosis fungoides is a lymphomatous disease.

We have, we trust, shown how one lymphoid condition grades into another until it is frequently impossible to tell which is hyperplasia and which is neoplasm; we have shown how many of these diseases have an associated leukæmia, that the histological picture is very similar, and that there is a close similarity in the clinical course. Many of the lymphoid diseases have nodules in the skin whose structure resembles that of mycosis, and lastly the same remedies are helpful for a time.

As regards ætiology, Emerson has called attention to the resemblance between acute leukæmia and an acute infection. Acute leukæmia grades off into chronic leukæmia, and the other lymphoid diseases under discussion are certainly related to the leukæmias. The report of White and Proescher regarding the finding of spirochætæ in Hodgkin's disease and lymphosarcoma, although it still lacks confirmation, is of interest in this connection. By analogy one would think that there was a similar organism which caused all of these diseases, and that the organism might perchance be a spirochæta. Orton and Locke searched for a spirochæta in their cases of mycosis and attempted to reproduce the disease in a ring-tailed monkey. We would suggest the use of the dark-field illuminator and that experiments be confined to the higher apes.

The following tables show graphically the similarity and dissimilarity between *mycosis fungoides* and the *sarcomata* and *lymphomata* and the *infectious granulomata*. The statistics have been taken from the latest standard authorities, to whom due credit is generally given. The recent literature for all of these diseases has been gone

over, and all of the epoch-making articles have been read. Wherever possible statistics have been gathered from American sources, for in no other way could we obtain a true idea as to the prevalence of these diseases in the negro. In no instance have percentages been given without the study of a large number of cases. With reference to blastomycetic dermatitis, our experience at the Johns Hopkins Hospital has been that the disease is far from rare in the negro, even though only one or two cases have been reported by others.

NOTE.—With regard to the X marks given under treatment: X may retard the course of the disease, XX may cure a few cases, XXX is usually curative.

	<i>Mycosis fungoides.</i>	<i>Giant-celled myeloma.</i>	<i>Multiple myelomata.</i>
Age.	30 to 50	Over 20	30 to 60
Sex.	66% males.	Males predominate.	80% males.
Occurrence in negro.	Very rare.	Very rare.	Same as whites (?).
Duration.	2 to 5 years.	2 years up.	2 to 5 years.
Termination.	Death.	Recovery.	Death.
R. B. C.	Slight anæmia.		Slight anæmia.
W. B. C.	8,000 to 100,000.		5,000 to 40,000.
% lymphocytes.	About 35%.		
Ætiology.	Unknown.	Unknown.	Unknown.
Primary seat.	Skin.	Ends of long bones.	Bones.
Spleen.	Rarely involved.	Not involved.	Rarely involved.
Glands.	Rarely involved.	Not involved.	Rarely involved.
Skin.	Lymphomatous tumors, usually following eczematous eruption.	Not involved.	Erythroderma rare.
Other organs.	Rarely involved.	Not involved.	Not involved.
Bones.	Rarely involved.	Myeloma (?).	Several involved.
Fever.	Irregular to 101.	None.	Irregular.
Urine.	No Bence-Jones body.		Bence-Jones body.
Treatment	X-ray.	X.	X.
	Arsenic.		
	Intercurrent infection.		
	Coley's serum.	X.	
	Surgical removal.	XXX.	
	Mercury.		
Remarks.	Occasional leukæmia.	Much question as to the pathological position.	Tumor of cells of bone marrow plasma.

	<i>Myeloid leukæmic.</i>	<i>Chloroma.</i>	<i>Hodgkin's disease.</i>	<i>Mikulic's disease.</i>
Age.	30 to 50.	Average 18.	5 to 40.	30 to 50.
Sex.	62% males.	80% males.	80% males.	60% males.
Occurrence in negro.	Rare.	Very rare.	Rare.	Very rare.
Duration.	1 to 5 years.	3 to 18 mos.	2 to 5 years.	Very chronic.
Termination.	Death.	Death.	Death.	Recovery.
R. B. C.	Slight anæmia.	Slight anæmia.	Slight anæmia.	Slight anæmia.
W. B. C.	Average 400,000.	Myeloid or lymphoid or mixed leukæmia.	10,000 to 20,000.	Average 8,000.
% lymphocytes.	Actual increase.		About normal.	About normal.
Ætiology.	Unknown.	Bacillus (?).	Unknown (?).	Unknown.
Primary seat.	Bone marrow.	Bone marrow.	Glands.	Lachrymal glands.
Spleen.	Much enlarged.	Sometimes enlarged.	Hyperplasia and fibrosis.	Not enlarged.
Glands.	Myeloid change.	Sometimes enlarged.	Much involved.	Not enlarged.
Skin.	Nodules very rare.	Nodules in a few cases.	Nodules, pruritus, hæmorrhages.	No changes.
Other organs.	Leukæmic nodules in most internal organs.	Often infiltrated.	Sometimes infiltrated.	Not involved.
Bones.	Marked changes in marrow.	Marked change in marrow.	Not involved.	Not involved.
Fever.	Irregular to 103.	Irregular.	Irregular to 101.	None.
Urine.	Much uric acid.	Uric acid.		Negative.
Treatment	X-ray.	X.	X.	XXX.
	Arsenic.		X.	XXX.
	Intercurrent infection.			
	Coley's serum.			
	Surgical removal.		X (?).	XXX.
	Mercury.			XX.
Remarks.		A more malignant form of leukæmia.		Many impure cases



	<i>Acute lymphoid leukæmia.</i>	<i>Chronic lymphoid leukæmia.</i>	<i>Splenic anæmia.</i>
Age.	Young adults.	40 to 50.	40 to 60.
Sex.	66% males.	66% males.	80% males.
Occurrence in negro.	Rare.	Rare.	Same as white (?).
Duration.	Average 6 weeks.	6 mos. to 6 yrs.	5 to 15 years.
Course.	Downward, febrile.	Downward, intermittent.	Downward.
Termination.	Death.	Death.	Often death.
R. B. C.	1,000,000 to 5,000,000.	Average 2,000,000.	Average 3,500,000.
W. B. C.	12,000 to 800,000.	40,000 to 200,000.	Average 4,000.
% lymphocytes.	45% to 90% large.	99% small.	About normal.
Ætiology.	Acute infection (?).	Unknown.	Unknown.
Primary seat.	Glands (?).	Glands.	Spleen.
Spleen.	Sometimes enlarged.	Enlarged.	Enlarged.
Glands.	Slight enlargement.	Enlarged.	Not enlarged.
Skin.	Echymoses. Nodules. Vesicles.	Echymoses, prurigo, lymphoid nodules, bronzing, exfoliating dermatitis.	Bronzed.
Other organs.		Nodules may occur in any other organs.	Not involved.
Bones.	Leukoblastic tissue in marrow.	Leukoblastic tissue in bone marrow.	None.
Fever.	High.	Irregular to 101.	Normal.
Urine.	Uric acid excessive.	Uric acid from breaking down of leucocytes and Bence-Jones body rarely.	XX. X-ray.
Treatment	X-ray.	X.	X. Arsenic.
	Arsenic.	X.	
	Intercurrent infection.	X.	
	Coley's serum.		XXX.
	Surgical removal.		
Remarks.			

	<i>Sarcomatosis of glands.</i>	<i>Lymphosarcoma.</i>	<i>Sarcomatosis of skin.</i>	<i>Sarcoma of skin.</i>	<i>Kaposi's sarcoma.</i>
Age.	Young adults.	Adults.	Adult.	Adults.	Adult.
Sex.	Males chiefly.	Males chiefly.	60% males.	60% males.	80% males.
Duration.	1 year.	1 year.	2 years.	1-3 yrs.	1 to 8 years.
Occurrence in negro.	Very rare.	Very rare.	Very rare.	Rare.	Unknown (?).
Termination.	Death.	Death.	Death.	Death.	Death (?).
R. B. C.	Slight anæmia.	Slight anæmia.	Slight anæmia.	Slight anæmia.	Slight anæmia.
W. B. C.	Often increased (?).	Increased (?).	To 40,000.	Normal.	Normal.
% lymphocytes.	Increased (?).	Increased (?).	Normal (?).	Normal.	Normal.
Ætiology.	Spirochæte (?).	Spirochæte (?).	Unknown.	Trauma (?).	Unknown.
Primary seat.	Glands.	Glands.	Skin.	Skin.	Skin.
Spleen.	Metastases.	Metastases.	Metastases.	Metastases.	Metastases.
Glands.	Many involved.	Metastases.	Metastases.	Metastases.	Metastases.
Skin.	Rarely involved.	Few involved.	Multiple tumors.	Single tumor.	Multiple tumors (?).
Bones.			Not involved.		
Other organs.	Metastases.	Metastases.	Metastases.	Metastases.	Metastases.
Fever.	Irregular.	Irregular.	Low, irregular.	None.	None.
Urine.	Normal.	Normal.	Normal.	Negative.	Negative.
Treatment	X-ray.	X.	X.	X.	X.
	Arsenic.		X.		X.
	Intercurrent infection.	X.	X.		
	Coley's serum.	X.	X (?).	X.	
	Mercury.				
Remarks.	Chiefly confined to glands.			X. Any type sarcoma.	Many impure cases.

	<i>Lupus.</i>	<i>Syphilis.</i>	<i>Fauc.</i>	<i>Leprosy.</i>	<i>Blastomycosis.</i>
Age.	Children.	Adults.	Young.	Any.	Any.
Sex.	66% females.	Both.	Both.	Both.	80% males
Occurrence in negro.	Same as whites.	More.	Many more.	More.	Same (?).
Duration.	Many years.	Many years.	6 mos. to 3 yrs.	Years.	Chronic.
Termination.	Arrest.	Arrest.	Cure.	Death.	Arrest.
R. B. C.	Normal.	Slight anæmia.	Normal (?).	Slight anæmia.	Normal.
W. B. C.	Normal.	Normal.	Normal (?).	Normal.	Normal (?).
% lymphocytes.	Normal.	Increased.		45% average.	Normal (?).
Ætiology.	Tubercle bacillus.	Treponema pallidum.	Spirochæte.	Leprosy bacillus.	Blastomycetes.
Primary seat.	Skin.	Chancre, then septicæmia.	Skin (?).	Septicæmia.	Skin.
Spleen.	Normal.	Enlarged.		Normal.	Normal.
Glands.	Rarely involved.	Enlarged.		Normal.	Normal.
Skin.	Primary seat.	Involved.	Involved.	Involved.	Fungous growth.
Bones.	Normal.	Periostitis.		Invaded.	Normal.
Other organs.	Normal.	Involved.	Normal.	Nerves involved, also other organs.	Normal.
Fever.	None.	Slight.	None.	In prodromals.	None.
Urine.	Normal.	Normal.	Normal.	Normal.	Normal.
Treatment	X-ray.		XX.	X.	X.
	Arsenic.	X.	X.		
	Intercurrent infection.		X.		
	Coley's serum.		X.		
	Mercury.	XXX.		X.	
Remarks.	XX. Rare in America.	Wide spread.	Confined to tropics.	Tropics and Norway, China, etc.	Many cases near Chicago and in California.



Author	Large Small						W. B. C.	R. B. C.	Hæmo- globin Per cent.
	Polys. %	Eosins. %	monos. %	monos. %	Trans. %	Masts. %			
Strobel & Hazen.....	50.2 74.8 52.5	9.8 6.6 15.0	4.4 1.6 10.5	32.0 14.0 20.5	3.0 2.6 1.5	0.6 0.4 1.5	9,700 11,000	3,000,000	50
Orton & Locke.....		9.2							
Galloway & MacLeod....	69.0	1.6	5.0	25.0			18,750 8,000	slight anæmia slight anæmia 4,900,000	
Spiethoff .....		8.0							
White & Burns.....	60.0	2.5	8.0	29.0			16,000	5,000,000	
White .....	63.0	7-19		30.0			13,400		95
Giovanni .....	69.0	12.0		29.0			15,240	4,580,000	45
Heller .....	72.6 63.6	3.0 2.7		24.4 33.7			7,000 2,470	4,500,000 4,100,000	80 65
Sequeira .....	72.3 78.0 68.8	2.8 0.0 2.6	12.0 6.5 16.2	8.2 14.5 12.2	4.4 0.0 0.0		1,200 10,000 9,400	5,340,000 5,612,000 5,650,000	100 95 90
Lenoble .....	53.0	12.0	15.0	17.0		0.5	8,000		
Gaucher & Brin .....	59.4	22.5	17.8	0.3			9,600	3,700,000	
Kaposi .....							125,000	3,800,000	
Beurmann, de, & Verdun	71.0 53.0	3.5 8.0	23.0 25.0	2.5 14.0			8,000 6,000	3,120,000 3,580,000	
Leredde .....		27.0 37.0		50.0			17,000 112,500		
Zumbusch, von .....	68.0 67.0 68.0 64.0 23.0	5.0 1.0 1.0 48.5	4.0 4.0	24.0 29-38.6 30.0 17.0 28.6		0.5	9,200 15,800 10,200 15,300 32,800	4,512,000 4,900,000 4,700,000 4,100,000	63 85 90 64 60
Pautrier & Fage .....	75.0	1.0	16.0	7.0			4,800	5,500,000	
Jambon & Rimaud .....	34.6 44.5	44.6 38.7	6.0 6.4	14.6 10.4				4,960,000	
Hodara .....	60.0 75.0 48.0	1-2.0 7.0 6.0	25.0 6.0 35.0	14.0 12.0 10.0			increase		
Pelagatti .....	77.0 77.0 74.0	2.0 1.0 1.0	5.0 6.0 6.0	8.0 4.0 3.0	7.0 9.0 11.0	1.0 3.0 4.0	23,000 82,000 122,500	4,000,000 1,900,000 1,140,000	85 50 44
Danlos .....	31.0	37.0		32.0			112,500		
Pasini .....							100,000		
Riecke .....							16,000 9,000 5,000	5,000,000 4,402,000 4,691,000	48 35 60
Brandweiner .....	62.0	4.0	10.0	18.0		2.0	3,200	3,600,000	85
Leredde & Weil .....	66.0	2.0	32.0				19,000		
Abraham .....	54.7	7.3		37.9			13,000	5,850,000	90
Krassnoglasow .....	44.0	40.0	5.0	9.0	1.0	1.0	23,000 5,000	4,350,000 1,600,000	77
Pardee & Zeit .....							rose rapidly to 1 to 20		
Roman .....	68.5	0.5	17.0	12.0	2.0		9,500	4,000,000	75

Certain similarities should be apparent.

(1) In all of the LYMPHOMATOUS GROWTHS, as well as in SARCOMA, males are affected in about 75 per cent. of the cases. These diseases are extremely rare in the negro. In the acute forms, such as chloroma, acute lymphoid leukæmia, and glandular sarcomatosis, the young are chiefly affected, but in the more chronic forms of disease the average age is over forty. With the exception of the more malignant sarcomata and leukæmias the duration of life is about the same. Patients slowly lose weight and strength, and die either from cachexia or from secondary infection. With the exception of lymphoid leukæmia where there is anæmia due to crowding out of the parent red blood cells by leukoblastic tissue, there is some degree of secondary anæmia. Practically all cases show a slight increase in the actual number of leucocytes, and in both the actual and relative number of lymphocytes. Most of the diseases, including mycosis, may show a concurrent leukæmia; mycosis fungoides alone shows a marked eosinophilia. Most of this group may show either an eczematous or tumor-formative condition of the skin. As regards treatment it has been found that X-rays and arsenic will temporarily improve the majority of the conditions. Concurrent infections, especially erysipelas, will often help and, in rare instances, cure the disease. The use of Coley's serum has occasionally been of benefit; Gottheil has recently reported a case where the patient was much improved by its use.

(2) The INFECTIOUS GRANULOMATA chiefly affect the young, lupus attacks far more females than males, though blastomycosis attacks more males. In general, negroes are more prone to all of these diseases than are whites. With the exception of those attacked by leprosy the patient usually recovers, though the diseases, with the exception of yaws, are much more chronic than those of the above mentioned group. Continued or intermittent fever is practically unknown, in contradistinction to what occurs in the lymphomata. There is very little anæmia, and leukæmia is unknown, except in very rare instances of glandular tuberculosis. Most of these diseases occur in certain countries only and are not so widespread as those in the first group.

As regards bibliography only the most important articles, those directly referred to in the text, and those containing the best references, have been inserted.

#### CONCLUSIONS CONCERNING MYCOSIS FUNGOIDES.

(1) There is a group of myeloid and lymphoid conditions all closely related; mycosis fungoides belongs to this group, and for the present at least should be classed as a lymphoma of the skin. The exact relationship of these various diseases is as yet far from clear. The "serum reaction" recently described by de Beurmann and Verdun may throw some light upon this. Also more careful autopsies, studying the lymphatic system and the marrow of all long bones, are urgently needed.

(2) The lymphoid and myeloid diseases probably have a common exciting cause, possibly a microörganism, and in this way may be related to the infectious granulomata.

(3) The lesions should be searched for spirochætæ, or allied organisms, especially by means of the dark-field illuminator, and inoculations made into the higher apes.

(4) Hodgkin's disease or leukæmia with cutaneous nodules, leprosy, multiple sarcomata, or eczema with accidental concurrent tumors may be falsely diagnosed as mycosis.

(5) As pointed out by both Crocker and Whitfield, and as exemplified in our case, the earliest lesion may be a papule. Most American authors appear to have overlooked this fact.

(6) The apparently normal skin may show characteristic cellular deposits.

(7) The premycotic lesions have a definite pathological picture, whereby a correct diagnosis may always be made.

(8) There is no characteristic blood picture, though there is often a moderate secondary anæmia, varying leucocytosis, and an increase in the large mononuclears and eosinophiles.

(9) The X-ray and Coley's serum should be tried in the treatment.

(10) The disease is rare in the negro, these being the only cases upon record.

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FIG. 2.  
Mycosis Fungoides.  
Papules on arm and plaques on side.



FIG. 1.  
Mycosis Fungoides.  
Tumors of face and eczematous areas of neck.





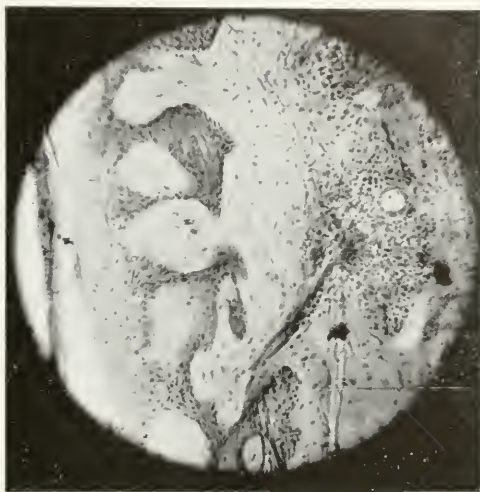


FIG. 4.

*Mycosis Fungoides.*

Earliest lesion is macroscopically normal skin.  
Dilated blood vessels with surrounding  
infiltration. Capillary with greatly  
thickened walls running up into  
papilla.



FIG. 3.

*Mycosis Fungoides.*  
Plaques and tumors.



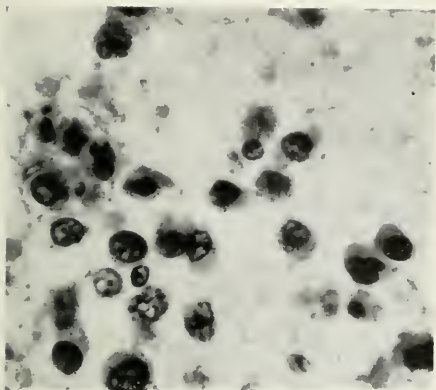


FIG. 5.  
Cells from multiple myeloma.

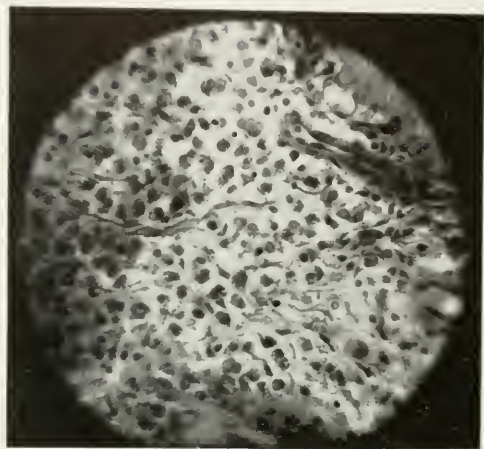


FIG. 6.  
Mycosis Fungoides.  
Plasma cells from tumor.

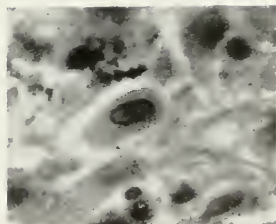


FIG. 7.  
Mycosis Fungoides.





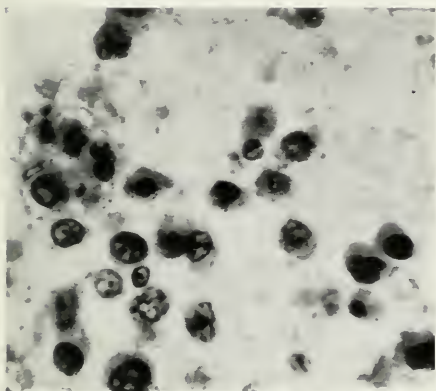


FIG. 5.  
Cells from multiple myeloma.

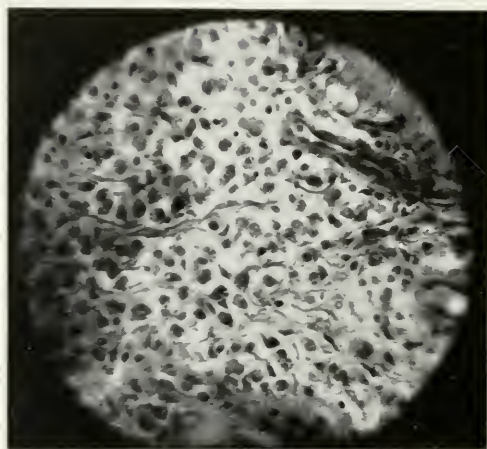


FIG. 6.  
Mycosis Fungoides.  
Plasma cells from tumor.

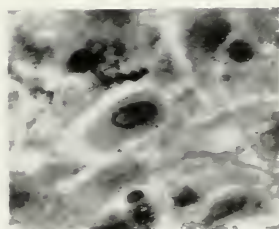


FIG. 7.  
Mycosis Fungoides.



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## EXPOSURE TO THE SUN AS AN ÆTIOLOGICAL FACTOR IN ALOPECIA.\*

By GEORGE F. HARDING, M.D., Boston.

THE title of this paper would perhaps have been better put in the form of a query, as it is an expression of a theory deduced from the observation of a number of cases, rather than the demonstration of a fact derived from scientific experimentation.

It is now some years since the custom of going about in the open without a head covering was started, partly from popular belief that it was of benefit to the hair, partly as a result of medical advice. The idea seems to have started from the fact that savage races and peasants, who are continually in the open, have as a rule abundant natural head covering; also from the impression that the bluecoat boys of Christ-Church Hospital in London, who never wear hats, possess hair of more than ordinary thickness. Since this hatless period has started, however, it has seemed to me that there has been an increase in alopecia, and that the hair has suffered very much from this exposure to the sun.

In order to present this matter, I have noted three hundred and twelve cases, seen in private practice in the last four years, showing practically the same symptoms in young subjects of both sexes between the ages of twelve and twenty, all of whom had been for a year or more going in the open without head covering.

These cases were picked from a much larger number, which included adults, whose scalps showed similar features, in order to eliminate other possible ætiological factors. It seemed, for example, that the limitation of the age to a period between twelve and twenty years would insure a time when the hair would normally be at its best, as in the younger subjects the growth is apt to be more vigorous at that age, and in the older ones the question of hereditary tendency would have less bearing. All cases where there had been any illness within a year were omitted, as well as those where a history of any previous disease of the scalp could be obtained.

There were one hundred and ninety-eight males and one hundred and fourteen females. This difference could readily be attributed to

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

the fact that boys were more apt to go without hats than girls, and that the girls' hair, being longer, would be more of a protection. The exposure in the majority of cases occurred in the summer. In thirty-six cases, however, occurring in those who lived in the country, there was exposure the whole year round; but the symptoms were not any more marked in these individuals. Two hundred and fifty-seven spent their summers at the seashore, and in these cases the symptoms were more marked. That the symptoms should be worse in these cases would seem but natural, owing to the lack of shade trees and to the fact that a good part of their time was spent on or in the water in sailing and bathing. Somewhat over one-half played tennis in the sun and perspired freely, so that the hair was thoroughly wet, and after playing they took shower-baths or went in bathing and afterward allowed their hair to dry in the sun.

A large proportion, two hundred and ninety-three, were blonds. This might have been merely a coincidence. On the other hand it might be accounted for under the old theory that persons and animals with dark hair and skin are less sensitive to the sun's rays than blonds. The fact that light hair is, as a rule, much finer and more delicate than dark might also be taken into consideration.

The symptoms in these cases were quite constant but varied in degree with the amount of exposure which had been undergone, and somewhat with the individual. The hair was dry, lustreless, and faded, and in the cases of several seasons' exposure felt more like tow than hair. The scalp over the region of the occipito-frontalis aponeurosis was stiff and adherent; in the more marked cases hardly movable. There was evident lack of sebaceous secretion, the scalp being in all cases extremely dry, and in many cases a fine desquamation was noticeable. Itching, such as one might expect in a dry skin, was usually present but not constant. The alopecia, as a rule, showed itself in those cases of but one season's exposure, about a month or six weeks after the return to the city and hats, and responded quite readily to treatment. In those who had had several seasons of exposure without intervening treatment, the fall had been continuous and baldness was often marked. These cases did not respond well to treatment, and the prognosis was decidedly unfavorable for a good growth of hair. As a rule the thinning was over the region where ordinary baldness occurs, but in several individuals, who had been in the habit of lying face downward on the sand for an hour or more every day during the summer, a marked thinning was noticeable over the occipital region, and the hair had the same harsh dry



feel here which occurred in those who were affected about the region of the vertex.

A very interesting case was observed in an adult, a man of thirty-six years, who had for a long time suffered from chronic psoriasis which affected the trunk and extremities. He had for the last few years spent several hours every day exposing his body to the sun, with the head protected, and found that by this treatment he was able to keep the disease under control. Two years before I saw him the disease began to appear on the forehead and through the scalp, and by the end of a year had become so extensive that he determined to try the "sun treatment" there. He had always had a thick, bushy head of dark hair and no thought of baldness. After three months of daily exposures the psoriasis was improved, but he found that his hair was becoming harsh and dry and there was marked alopecia. He persisted in the treatment, however, and at the end of eight months, when I saw him, he was distinctly bald and the scalp and remaining hair presented the same appearance noted in the cases already mentioned.

This history seems particularly significant to me, as it would indicate that the sun's rays are capable of producing an action similar to that of the X-rays, but being less intense require longer exposure to bring about a result. It is certainly a well-known fact that the radiations of both varieties of ray are capable of the same analysis.

It is also well known that the intensity of the sun's rays is modified by certain conditions. For example, their action is lessened in a moist atmosphere, or where there is much fog; it is also said to be less marked in certain high altitudes. For this reason one might expose the scalp to the sun in one region without bad effect when it could not be done in another. It would seem as if the lack of injury to the hair of the Christ-Church Hospital boys under daily exposure might be accounted for by such atmospheric influence. The same thing can be said of certain classes of peasants who go uncovered in their own country. A good many of these, however, are in the habit of using oils freely on the hair, which would prevent it from becoming dry, and act as a protection. These same peasants coming to this country, where the atmosphere is dryer, show after a certain period a dryness of the hair and have marked alopecia. This applies mainly to the women, for the men are seldom seen without hats, yet it is the exception to find one without a good head of hair.

I was interested some years ago to look over the heads of a number of Italian laborers who were living in shanties in the neighborhood of Boston. The conditions of living were absolutely unhygienic; they all wore heavy black felt hats, and yet a poor head of hair among them was difficult to find.

In taking into consideration the uncivilized, or savage races, a number of points come up to show why their hair should not be thinned by constant sun exposure. In the first place, the structure of their hair is different, being coarser and hence more resistant. The color is almost invariably dark, which, as I have previously said, probably renders the hair less sensitive to the sun's rays. Many of them pile the hair on top of the head in coils, or interweave it with various materials, which acts to some extent as a protection. Nearly all use freely some form of grease, saturating the hair thoroughly with it. Among the African tribes there is a custom of rubbing thickly on the head a kind of clay which they claim protects them from the sun.

It is a notable fact that seafaring men have, as a rule, heavy heads of hair, yet they do not expose their scalps to the sun. I have frequently observed boys and young men sailing bareheaded in the summer time, and the skipper accompanying them, who might be a man of from forty to fifty years of age, always wearing a cap. The boys' hair would be sparse, dry, and lifeless, while the skipper's would be thick and strong. I am utterly unable to account for this difference if it is not due to exposure to sun. Certainly it is not by reason of different physical conditions and surroundings. I have observed the same thing in two boys whose mode of life was practically the same, where one wore a hat when in the sun and the other did not.

For more than ten years I have been in the habit of advising against going in the sun without some sort of head covering, but have found great difficulty in having this advice carried out, especially in young subjects. When it has been followed I believe that I have seen beneficial results. I do not wish to give the impression that I disapprove of giving the scalp plenty of light and air, for that I regard as necessary for the well-being of the scalp. It is the direct exposure to the sun's rays that causes the damage, and the effect can be produced in cold as well as hot weather if the exposure is long enough.

As I said at the beginning of this paper, I have merely brought forward a theory which to me is convincing, and if it has no more result than to call attention to the subject, and lead to investigation by others, it will have attained its object.

## DISCUSSION.

Dr. PUSEY said he was glad that Dr. Harding had brought this subject before us. Several years ago, the speaker said, reasoning from the analogy of the X-ray, he was led to question the wisdom of exposing the tender and sparse scalps of many people to sunlight. The analogy was very close between the highly actinic rays of the sun and X-rays, and there was no doubt that we could produce baldness by the latter. Since taking this theoretical view of the subject, Dr. Pusey said, he had been applying it in a general way to cases of alopecia that came under his observation, and it was certainly his experience that in the autumn, people who had spent the previous summer going bare-headed in the country or at the seashore formed a large proportion of his patients who complained of a loss of hair.

Dr. HYDE, after thanking Dr. Harding for calling attention to this subject, said we all knew that the X-ray and electricity might prove to be either most damaging or most beneficent agents. It depended largely on the dosage, and in the matter of the effect of sunlight in producing either hirsuties or alopecia, probably the racial element had much to do with it. A difference in the quality of the hair could be noted in different breeds of horses and the same was true of human beings. In Boston and vicinity, for example, many of the people had an inherited delicacy of fibre which was the frequent accompaniment of thin and fine hair. Dr. Hyde said he had recently visited the Smithsonian Institute and in their large collection of photographs of men of all races of the human family, had found only two bald heads in Africans, both in European dress, presumably hat-wearers. In South Africa and other tropical countries, almost all the natives had a plentiful supply of hair which they used as a protection against the sun. These negroes were in the habit of using a large amount of oil and grease on the scalp; and the author of the paper had properly recognized this as one of the factors in insuring an ample growth of hair in persons of both sexes of African blood. Dr. Hyde exhibited a number of photographs of half-naked savages of both sexes, whose heads had been protected by their own hair only—all of them enjoying a plentiful growth of hair on the scalp.

Dr. SCHAMBERG said that medical tradition often exerted such a potent influence that new views were restrained. He fully agreed with Dr. Hyde that with all physical agents, heat, light, the X-ray, etc., the therapeutic effect was largely a question of dosage. All of these physical agents primarily stimulated cell activity, but as this went on through its various stages, there was weakening of cell activity and ultimately cellular degeneration or death.

As to the superior hair growth of negroes living under primitive conditions, the fact must be borne in mind that there were other factors besides light which influenced their hair vitality. Indoor life, excessive eating, complex social burdens, and mental activity all tended to lessen tissue vitality, and these factors were absent in negroes, esquimaux, and Indians living under primeval conditions. The general health was a factor of great importance in the growth of the hair, especially in women, and in the majority of cases of hair loss in women the condition was distinctly associated with a deterioration, often subtle, of the general health.

Dr. DURING said that Dr. Harding's paper brought up for discussion a practical question. Personally, he thought that long continued exposure to strong sunlight was injurious to the scalp, and there were many people in this country from the age of ten to thirty years who had gone to the extreme in the matter of exposing their head to the sun. This was an opportune time for the profession to direct attention to the injurious effect of long continued sunlight upon the scalp and hair, with the hope that fewer young people would unnecessarily expose

themselves in this way. He had also long held that a deranged condition of the nervous system, brought about by various causes, including toxæmia from intestinal disorder, was in some cases an important factor in the loss of hair, both partial and complete.

DR. STELWAGON said he thought that moderate exposure both to the sun and air was really of great advantage to the scalp and hair. It was well known that the actinic rays would produce a growth of hair; and any one who had used the X-rays in acne or similar conditions had seen the exposures followed by a slight growth of down on the face. Occasionally, even in alopecia areata the rays had been commended in moderate doses.

There was no doubt, Dr. Stelwagon thought, that the nervous system was a factor in the loss of hair, but not infrequently luxuriant hair growth was observed in those of excitable, artistic temperament. During the past three or four years he had had occasion to meet several violinists and other musical artists, a few of international reputation; these people were of a distinctly nervous temperament, extremely emotional, and yet in most instances their hair was not only profuse, but long.

DR. BIDDLE said that for many years one of his confrères had proven to his own satisfaction that loss of hair was due to a poison produced by improper breathing. According to his theory, there accumulated in the upper air passages a poison which he had isolated and which he believed was responsible for the loss.

DR. PUSEY said he would not like the statement that everyone agreed that X-rays sometimes stimulated hair growth go without exception; he had not seen such occurrence.

DR. STELWAGON said his statement was that slight exposures to the X-rays would occasionally start a regrowth of hair.

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## SOCIETY TRANSACTIONS.

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### NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, October 25, 1910.

WILLIAM B. TRIMBLE, MD., *President*.

Initial Lesion on the Chin. Presented by DR. WHITEHOUSE.

The patient, a man forty-seven years of age, had an initial lesion on the chin, which he said began after being cut with a razor five weeks ago. How it became infected was not clear. He said it bled very freely and he staunched the blood with a piece of clean linen which he kept for general purposes, but the wound did not heal. Dr. Whitehouse saw him several days ago and had the house surgeon examine the serum from the lesion for spirochætæ, which were found. There were now two or three lesions outside of the original larger one, located to the right of the middle line, which had cleared up considerably under an antiseptic ointment. He had the roseola well marked all over his body.



DR. MORROW said that he had seen at least half a dozen cases of chancre of the chin which were presumably infected by a barber as the result of shaving. In one case, in private practice, the lesion was very extensive and there was scarcely any infiltration about the edges. It had been treated for nearly a month as a ringworm of the chin. This was followed by an unusually severe type of syphilis, with a precocious development of pustular lesions. It was one of the most extraordinary pustular syphilides he had ever seen, though that may have been a mere coincidence. The theory had been entertained that extra-genital chancres were apt to be followed by a very severe form of constitutional syphilis; certainly this case was an unusually severe one. He had seen two or three other cases, but none so marked. In the case alluded to, three-fourths of the entire circumference of the chin was affected.

DR. BULKLEY said that probably a large number of cases of chancre occurred from shaving. He wished to differ from what Dr. Morrow had said about the severity of the disease from extra-genital chancre. He had seen far more severe results from the extra-genital form than from those which occurred on the penis. There was not usually much hardness in chancres of the face; many of them at first could not be diagnosed from some pus lesions or ringworm. This absence of hardness had impressed him very forcibly, and he had called attention to it before.

#### Tuberculosis of the Skin. Presented by DR. HOWARD FOX.

The patient had been shown at a meeting held last Spring as a case for diagnosis. Most of the members had considered the affection to be lichen planus. One member felt confident that it was syphilis. During the summer the patient had taken mercury in the form of protiodide tablets ( $\frac{1}{4}$  gr. three times a day) for four months without producing the slightest effect upon the eruption. A biopsy showed the case to be a superficial cutaneous tuberculosis, an opinion originally expressed by Dr. Jackson at the Vanderbilt Clinic from clinical observation. The following histological report was kindly made by Dr. Udo J. Wile:

"The epithelium showed marked thinning, in places being reduced to two rows of cells. The surface, however, was unbroken. There was slight intracellular œdema in the lower cells of the rete.

"The main change was seen in the subpapillary layers and consisted of a broad strip of infiltration extending parallel to the surface, encroaching closely upon the basal layer of the epiderm and occupying exclusively the subpapillary layer of the cutis. The rather sharp circumscription of this infiltrate was striking. The infiltration itself consisted of epithelioid cells, small round cells in larger numbers, and scattered here and there giant cells of the Langerhans type. These cellular elements were not arranged in typical circumscribed tubercles, but they constituted a diffuse form of infiltration. There were moderate numbers of plasma cells scattered through the infiltrate and a few were also seen surrounding the vessels of the deeper layers of the cutis. Much of the infiltrate showed definite necrobiosis and softening and this was especially true of the cells lying in the neighborhood of the giant cells. The elastica was seen as fragmented bands; at the periphery of the infiltrate it was entirely absent



within the process itself. A few small veins within and at the margin of the infiltration showed obliterative changes.

"These changes, while not those of a lupus or tuberculosis verrucosa cutis, nevertheless constituted a picture which might be interpreted as a superficial form of cutaneous tuberculosis."

DR. JOHNSTON said that he had examined a specimen from the case, and Dr. Fox had presented his conclusions, which had been reached by exclusion. The only diagnosis other than tuberculosis to be considered was blastomycosis, and this was excluded by absence of the organism. No stain had been made for bacilli.

DR. WHITEHOUSE said that from the clinical standpoint alone he would judge it to be a case of tuberculosis.

The diagnosis was generally accepted.

#### **Tuberculide. Presented by DR. WHITEHOUSE.**

The patient was a young Russian woman of twenty-one years, who had not been able to give any definite history, and who seemed to be somewhat deficient mentally. Dr. Whitehouse said that she had come to him for treatment first last May with an eruption which he diagnosed as a tuberculide. At that time she stated that it had existed for two and a half years, which would now be three years. She had some lesions on the palm, but the eruption was chiefly confined to the forearms and regions around the knees. Some of the lesions were hard, shiny, and flat-topped, resembling lichen planus, but most of them conformed clinically to the picture of tuberculide. She had some lesions on the ears, which improved during the summer. All the lesions left small scars. The lesions showed well-marked necrosis in the centres without any evidence of pus.

Those on the palm were more solidified in character than some of the others. There was no itching, and they did not change much in character.

DR. FORDYCE agreed with the diagnosis of tuberculide, although it differed from the ordinary type in that it was more superficial and the scarring was much less than usual.

#### **Tuberculous Ulceration of the Lip. Presented by DR. GEORGE HENRY Fox.**

The patient, a man aged thirty-six, was first seen two months ago with two crescentic ulcers on the lower lip suggesting mucous patches, although he presented no history or evidence of lues. Ulceration began eighteen months ago, healed and relapsed, with swelling of the glands on the right side of the neck. Thorough cauterization of the patches with pure acid nitrate of mercury had healed the ulceration and the mucous surface then presented a roughened appearance. A biopsy showed the histological structure of tuberculosis and the presence of

tubercle bacilli. The following pathological report was kindly made by Dr. Udo J. Wile:

"A small piece of the ulcer was removed under novocaine by the method of transfixion, the transfixed ligature being tied as soon as the wedge of tissue was removed to prevent hæmorrhage. The tissue was hardened through alcohol of increasing strength, embedded in celloidin, and the sections stained with eosin-hæmatoxylin, polychrome methylene blue, orcein and methyl-green pyronin.

"Under the low power the section showed a deep ulcer from which the epithelium arose abruptly on either side. The epithelium was slightly thickened where it approached the sides of the ulcer and its lower layers were invaded by numbers of polynuclear leucocytes. The floor of the ulcer itself was made up of large numbers of round cells of the small lymphoid type, a few plasma and mast cells, and scattered here and there giant cells of the Langerhans type: a few typical tubercles were also seen in the ulcer itself, but a much more typical tuberculous structure was seen deep in the submucosa and even as far as and invading the muscularis. Here were large numbers of circumscribed tubercles of text-book type, each having a central giant cell surrounded by a layer of epithelioid cells, these in turn being surrounded by small round cells. In many of such circumscribed tubercles a definite central softening and necrosis was noticeable. Very striking also were the large numbers of mast cells surrounding and scattered about the nodules. A very large number of sections were stained for tubercle bacilli and a few acid fast organisms were finally found in one of the sections."

Dr. MORROW said that the result of the application of acid nitrate of mercury was very good. If it were not for the fact that Dr. Fox reported that tubercle bacilli were found in abundance, he would be disposed to think this a case of syphilis, for the objective appearance of the mucous membrane was most suggestive.

Dr. WICKHAM agreed with what Dr. Morrow had said.

Dr. FORDYCE said that he had seen a case which was almost identical in its clinical manifestations. A portion of the lesion had been removed and a microscopic examination proved it to be tuberculosis. Both of these cases presented features in common with syphilitic lesions and illustrated how closely these two conditions resembled each other.

Dr. TRIMBLE referred to a case of tuberculous ulcer of the tongue which he had shown last winter. Most of the advice received was to treat this condition palliatively, and this he did until he was dissatisfied with the result; he then treated it with acid nitrate of mercury, and it was now very much improved—almost healed on one side, the side that was least affected. The patient was still under treatment. A guinea pig inoculation finally proved the case to be tuberculous.

Dr. SHERWELL inquired what strength of acid nitrate of mercury was used; to which Dr. Trimble replied that he used it pure. Dr. Sherwell then said that it would probably be better to use it diluted, as its alterative effect would then be better, without causing a necrosis.

In reply to an inquiry from Dr. Fox as to whether the patient suffered much pain from the application, Dr. Trimble said that he used the U. S. P. solution, but cocaineized the parts first; this seemed to minimize the pain considerably, although it did not abolish it.

**Lepra Maculosa.** Presented by DR. HOWARD FOX.

The patient was shown on account of the resemblance to the case shown by Dr. George Henry Fox at the last meeting. Upon the ordinary yellowish-brown macules had developed vitiligo-like, depigmented areas. The patient was a woman twenty-five years old, born in the Bahama Islands where she had always lived until recently. She presented macular lesions of the face, trunk, and extremities. The eruption had first appeared two years ago upon the legs. She seemed to be improving under daily doses of sixty drops of chaulmoogra oil.

**Lepra Nodulosa.** Presented by DR. WINFIELD.

The patient was a native of the Barbados and had been in this country about four years. The lesions had been present for about four months, and had developed very rapidly.

**Leprosy, Recognized Early by a Perforating Ulcer of the Great Toe.**  
Presented by DR. BULKLEY.

Mr. V. D., aged twenty-four, of French descent, native of Nevis, West Indies, was well up to four years ago, when he had gonorrhœa which was badly treated, and followed a year later by severe gonorrhœal rheumatism; much of his later trouble had been attributed to this, and to prolonged exposure to wet, and possibly syphilis. The pains he had experienced and the ulcer of the great toe were attributed to "tropical neuritis."

When first seen, Aug. 17, 1910, he presented a perforating ulcer on the under surface of the right great toe, and it was soon found that he had pretty general anæsthesia of the legs, to the hips, and also of the arms, the body not being much affected. This had begun some three years ago, in the right leg. There was nothing about the face or ears to suggest leprosy, nor was there any generalized eruption on the body or limbs.

But it was noticed that the hands were somewhat shrunken and on the back of the right middle finger there was a raw surface, which was the result of a burn received on August 14th, which was painless, and of which he was unconscious at the time. On examining the hands minutely some superficial, flat, tubercular masses were found on both little fingers and on the dorsal aspect of the left forefinger: there was also a sharply punched-out ulcer in the centre of the under surface of the right great toe, discharging serum: while this was not painful, it gave him some discomfort in walking.

A biopsy was made from the lesions on the fingers and the sections were found to be very full of bacilli which were presented to the Society for examination.

DR. MORROW remarked on the extreme frequency with which these cases were now brought before the Society as indicating an extraordinary increase of leprosy in this city, and asked Dr. Wickham whether in Paris they had found an increasing number from year to year, or whether the number there was on the decrease.

DR. WICKHAM replied that he thought the number of cases in Paris was rather less than formerly.

DR. MORROW then said that judging from the number of cases presented before the Society there would seem to be five times as many cases in a year as we had had ten years ago. The cases recently presented were all new ones. He thought more attention should be paid to the question of the contagiousness of these cases. It was certainly contagious in the countries where it was indigenuous, and it was very important to note whether the cases which appeared in this country were all of foreign origin.

DR. BRONSON said that while all would allow that more cases were presented before the Society now than formerly, he did not think there was an increase in the cases originating here. He himself could recall but one, a case he had once presented before the Society, though others might know of more. Until we had definite evidence that cases were originating here it could hardly be assumed that the disease was showing contagious features in New York. Many of these cases came from the West Indies, as there was more travel from that section.

DR. FORDYCE agreed with Dr. Bronson.

DR. BULKLEY said that he knew of only one or two endogenous cases. One of these, a man from Poughkeepsie, was shown before the Society twenty years ago. He was inclined to believe in the fish origin of this disease, just as in the case of the oyster and the typhoid germ. It might be due to eating caviare uncooked, with the germs in it. He would like to know if any of the gentlemen remembered other cases which originated in New York.

DR. BRONSON said that that was the case he presented before the Society twenty or thirty years ago, which originated in Hoboken. The patient came from Germany where leprosy, he supposed, did not occur. The patient was a longshoreman; had lived in this country some thirty years or more and had never left it since his arrival.

DR. WINFIELD said that he had shown a case originating here—a negro from South Carolina who left there when a boy of eight, and had lived in Brooklyn ever since. He developed the disease ten years ago and had now advanced leprosy.

DR. HOWARD FOX said that the child with the macular leprosy shown by his father at the last meeting, had lived all her life at Key West. There seemed to be no doubt that leprosy was more prevalent in the United States now than formerly, a condition that was due, perhaps, largely to closer relations with the Philippines and West Indies. It was due, in part, Dr. Fox thought, to a spread of the disease in this country. This was the opinion held by Dr. Dyer of New Orleans whose experience had been very extended.

DR. MORROW said that he had personally known of three cases that had developed unmistakable leprosy, where the individuals had never been outside of the United States. One, seen not long ago, came from San Antonio; another case he saw in California, and the third in this city. Dr. Atkinson, of Baltimore, reported two cases of indigenous origin. These cases were probably more common than was generally supposed. There seemed to be a growing tendency on



the part of the medical profession to deny the contagiousness of leprosy. The pendulum of opinion which formerly swung toward contagion, seemed now to be swinging in the other direction.

DR. TRIMBLE said that the period of incubation in leprosy was sometimes very long. He had seen a case which developed in this country. The patient was a Russian woman who had been away from Russia twenty-seven years. She may have contracted the disease in the old country. This long period of incubation might account for some of the cases supposed to originate here.

### Erythema Induratum. Presented by DR. FORDYCE.

The patient was a girl, aged fourteen, of American parentage. She was well nourished and aside from the skin eruption gave a negative history. The affection began about six years ago on her left leg which now showed scars of healed lesions. A year later the right leg became similarly affected, since which time she had had numerous attacks of small discrete lesions with necrotic centres and large, deep-seated, cutaneous nodules which gradually extended to the surface and ulcerated. At the present time she had a large ulcerated lesion and several smaller superficial necrotic ones. A Wassermann test gave a negative reaction. The Calmette test was strongly positive.

DR. BRONSON said that it seemed to be an interesting, unusual case of Bazin's erythema induratum. Ordinarily the indurations did not break down and ulcerate as in this case. Mauriac had described cases of what he called erythema induratum syphiliticum in which ulceration took place and in that respect resembled this.

DR. TRIMBLE said that the evidence of a positive tuberculin test, the negative Wassermann, the character of the condition under the microscope, and the strong family history—the father having died of tuberculosis—would seem to be convincing evidence of tuberculosis. Even if she were given specific treatment and the ulcer healed, he would still be inclined to think it tuberculosis, as the tonic treatment of mercury and potassium iodide was very beneficial in some of these cases. He would not be willing to change the diagnosis in this case on the strength of a therapeutic test.

### Case for Diagnosis. Chronic Congestion of the Skin. Presented by DR. JOHNSTON.

The patient was an Austrian, who for the past two years had had large diffuse lesions over the trunk and upper extremities and on the thighs, which seemed to be slightly infiltrated and the seat of passive congestion. There were no subjective symptoms at all, no itching or pain, no loss of tactile sensation, no evidence of pain or temperature. He complained most of stiffness in the thigh where there was some œdema. The idea was suggested that it might be scleroderma, but the skin was as soft and pliable as elsewhere. Syringomyelia had also been suggested.

DR. BRONSON said that it did not seem to him to be a case of scleroderma. It impressed him rather as an atrophic disease. Atrophy was certainly present



in the skin of the back and he believed it was because of this atrophy that the blood vessels were so plainly visible over the affected area.

DR. BULKLEY said that it would seem to be a pre-sclerotic stage of scleroderma, just as we had a pre-mycotic stage of mycosis. In the same way this might be a stage that had not been heretofore shown in the early form of the disease.

DR. SHERWELL said that he would call it either morphœa or scleroderma.

DR. WHITEHOUSE said that it impressed him as a sclerodermatous process. The tension and tightening which were beginning on the thighs would favor the impression that a typical scleroderma might declare itself later.

DR. TRIMBLE said that he thought on first examination, the case was one of scleroderma.

DR. JOHNSTON said that he could see no resemblance to scleroderma, as the skin could be easily picked up. There was evidently some interference with the return venous flow, but at present there was a connective tissue increase. It was more likely to result in elephantiasis than scleroderma.

#### Syphilis Treated with Ehrlich's "606." Presented by DR. FORDYCE.

The patient was an inmate of the City Hospital last May, and was there treated with 0.3 gm. of "606" in alkaline solution. He had had three initial lesions of the lip and a maculo-papular eruption on the body. His Wassermann reaction was strongly positive. The lesions disappeared in about two weeks. He was seen again on October 23rd. During the interval he had suffered from no recurrence and a specimen of blood taken at this time was negative. Dr. Fordyce said that this case illustrated the value of the drug in the early stages of the infection.

#### Syphilis Treated with Ehrlich's "606." Presented by DR. HOWARD Fox.

The patient was a young woman who had been given 0.5 gm. of the new remedy by the method of Wechselsmann. She was presented simply to show the severe local reaction that took place in some of the cases. The patient was one of a series of cases being treated by Dr. Fox in conjunction with Dr. Trimble in Dr. George Henry Fox's service at the Skin and Cancer Hospital.

DR. JACKSON said that the results were certainly remarkable.

DR. HOWARD Fox said that he had seen fifteen cases recently treated in Dr. Gottheil's service at the City Hospital. It was certainly a disappointing exhibition. Dr. Gottheil himself was not at all enthusiastic over the results obtained and thought that they could have been at least equalled if not surpassed by mercury. The cases had been treated too short a time to prove the value of the new remedy. In two of the cases treated by Drs. Trimble and Fox the spirochætæ disappeared at the end of seventy-two hours. The local reaction had not been severe in any case with the exception of the patient that was presented.

DR. MORROW said that he had not been so enthusiastic as most specialists over this new remedy, and looked upon it as the romance of therapeutics, to expect to cure syphilis with one or two injections of any remedy. Twenty-two years ago he had been in Paris, at the time that the hypodermic injection of

calomel was being introduced, and a vast number of articles were appearing in the medical journals, claiming that syphilis could be cured by one or two injections of the drug. There was no question that it did have a very remarkable influence over certain lesions, especially of the tongue and the throat, in obstinate lesions, that had resisted ordinary treatment, which was most surprising when compared with mercury by the mouth, or with inunctions; and it was not improbable that this new treatment would turn out in very much the same way. We were prone to undue enthusiasm, and while we hoped to secure a triumph over syphilis it was probable that this hope rather prejudiced our judgment. It was entirely too soon to pass judgment upon any case treated by this method. We would have to wait for three, four or five years before we could arrive at a definite judgment. The case presented by Dr. Fordyce certainly showed a most remarkable result. At the same time, we saw cases where the primary eruption disappeared under the influence of mercury, though perhaps not quite so promptly, leaving no evidence of the disease, and yet it was manifested later on by very characteristic symptoms. The speaker said he was rather more pessimistic than optimistic in his views as to the curative value of this new remedy.

It would probably turn out as did Koch's tuberculin treatment of tuberculosis. We all knew what enthusiastic claims were made for that treatment. Dr. Morrow said that he should very much like to know Dr. Wickham's impression as to the views of the Paris physicians upon the value of this method.

Dr. WICKHAM said that he had not himself given "606" a trial, though Dr. Emery, his colleague at the St. Louis Hospital, went to Ehrlich's clinic inclined to be very sceptical and returned very much pleased with what he had seen. Dr. Emery injected two cases the week before Dr. Wickham left Paris, and within the week they were very much improved. In one case the lesions had nearly disappeared and in the other they were rapidly healing. No judgment, however, could be given for many years, and it was rather dangerous to speak of a cure by "606," as yet, even if the results were very satisfactory. In any event, it seemed wiser, after having injected the new remedy, to continue with the old method of treatment.

Dr. BRONSON said that while it was wise to take a conservative view with regard to what the ultimate outcome of the "606" treatment might be, enough had been accomplished to merit very serious attention. He had himself been fairly bewildered by the really wonderful results of the treatment that he had witnessed the past summer in Vienna and Frankfort, especially in the latter city, where confidence in the remedy seemed very strong both in Prof. Herxheimer's wards at the City Hospital and in those of Prof. Treupel's at the Hospital of the Holy Ghost. He believed their results had never been equalled by any other method of treatment. Whether time would show that we had in "606" as effective an antidote for syphilis as we had for malarial disease in quinine no one could now predict. How much the present enthusiasm will have abated after two years and what modifications in method would suggest themselves, we could only wait and see.

He had been much interested in and rather surprised by the indifferent success shown recently in the exhibits made by Dr. Gottheil at the City Hospital. The results certainly were not in accord with what he had seen abroad, where his attention may have been called only to the best cures. One could never tell whether experiments made far from the point where the remedy originated and from which it was supplied might not be faulty in technique or otherwise inconclusive.

Dr. HOWARD FOX said that in regard to the cases at the City Hospital, Dr. Noguchi had prepared the material and given the injections himself.

DR. TRIMBLE said that in the cases at the Skin and Cancer Hospital, some eight or ten, the main point they were watching was to see how soon the Wassermann reaction became negative, and how quickly the spirochætæ disappeared. So far the cases seemed to show a very good result, though they had not been particularly impressed with the rapidity of the disappearance of the clinical manifestations. They showed some change for two or three days, and then remained stationary. The rapid disappearance of the lesions was not marked up to the present time, but they had only been working for two or three weeks and could not as yet tell anything definitely.

DR. FORDYCE said that he too had been very sceptical in the beginning, for he remembered the enthusiasm displayed over Koch's discovery, and its short duration, but the more he saw of the results of "606" the more enthusiastic he became. He now felt that we had a remedy with which it was possible to cure syphilis in two or three doses. Its method of employment would probably be modified in the near future and its application rendered easier. An observation of about forty cases had demonstrated to him that the drug was superior to mercury in many cases of syphilis, especially in the primary and secondary stages of the disease, as well as in some late manifestations which were intolerant to the use of mercury and potassium iodide.

#### Syphilis Resembling Psoriasis. Presented by DR. FORDYCE.

The case had no special interest except to show that syphilitic lesions could simulate almost exactly those of psoriasis. Examined alone, the various circinate and scaling lesions of the arms were absolutely indistinguishable from those of a prototype psoriasis, but the involvement of the mucous membrane and the presence of follicular lesions on the trunk of course enabled the observer to make a diagnosis.

DR. DADE said that it was an extremely interesting and instructive case.

#### Case for Diagnosis. Presented by DR. TRIMBLE.

The patient was a man twenty-four years of age. There was a superficial ulceration on the pillars of the fauces and the soft palate, occupying a space about the size of a silver dollar, grayish and film-like in appearance. The patient had a severe laryngitis and was unable to raise his voice above a whisper. The location now was on the right side, but it was formerly present on the left. The duration was seven months, the throat lesions appearing first and the laryngitis coming on two months later. There was no venereal history and no evidence of former lues. The examination for tubercle bacilli was negative; the Wassermann reaction was doubtful, being very weakly positive in one tube and

DRS. JOHNSTON, JACKSON, BULKLEY, and BRONSON thought that the lesion was syphilitic, Dr. Johnston adding that the throat patches might be irritated by topical applications, and a Wassermann performed the following day.

DR. SHERWELL suggested that before an absolute diagnosis was made the patient should be examined by a good laryngologist. A peculiar worm-eaten appearance of the larynx and appendages was a very distinct form of a tuberculous throat. This was very distinctive and a competent laryngologist should be able to give a better opinion of it than a dermatologist.

DR. DADE said that the excessive pain led him to think it was a tuberculous condition.

DR. TRIMBLE said that he was preparing to give the patient "606," but was desirous of getting absolute proof of the condition before giving the injection. Only one examination of the sputum was made, and that was negative.

**Darier's Disease.** Presented by DR. GEORGE HENRY FOX.

The patient was an Italian girl seventeen years of age. No member of her family had suffered from a similar affection. The disease had first been noticed nine years previously. She presented the typical eruption of horny papules upon the abdomen, vulva, neck, and hands. Upon the temporal region the papules were grouped together to form scaly patches somewhat resembling squamous eczema. The general health was excellent. Under X-ray treatment she had begun to show some improvement.

DR. HOWARD FOX thought that X-ray treatment offered the only chance for a cure of the condition. During a recent visit to St. Louis, Dr. Engman had shown an extensive case of Darier's disease which had practically disappeared under the X-ray.

DR. BULKLEY said that there had been a case at the Skin and Cancer Hospital when the X-ray was first introduced, in which there was a wonderful disappearance of the lesions. They healed up in a relatively short time. Then the patient left the hospital. Later on she came back to the clinic with a slight return of the condition; after that she was lost sight of.

**Case for Diagnosis.** Presented by DR. HOWARD FOX.

The patient was a German woman thirty-eight years old, who had applied for treatment of a tuberculo-ulcerative syphilide of the chest. In examining the patient the peculiar eruption for which she was presented was incidentally noticed. The patient had been very delicate up to her ninth year. She had been married fourteen years and had had four apparently healthy children. Between the first and second births she had had one miscarriage. The eruption (for diagnosis) was confined entirely to the thighs and legs and had first been noticed eighteen years previously. It was first noticed upon the inside of the thighs and had steadily increased in extent up to the present time. None of the lesions had ever disappeared, according to the patient's statement. There had never been any constitutional symptoms and she had never undergone any treatment for this condition. The eruption which was roughly symmetrical, consisted of yellowish punctate macules grouped together to form more or less reticulated patches. The lesions were not raised and apparently not scaly, though the patient insisted that they had at first been covered by fine scales. She also thought that the patches were redder during the first few years of their existence. Many of the individual lesions presented a somewhat shiny and atrophic appearance.

DR. JOHNSTON thought it might be an angio-sarcoma.

DR. JACKSON agreed with Dr. Johnston that it was probably a vascular trouble of angioma type.



Dr. BULKLEY suggested that it might be a self-produced eruption, and said that he would wish to watch such a case before making a diagnosis.

Dr. FORDYCE said that it was a very unique case and suggested angioma.

Dr. HOWARD FOX said that the idea of a self-inflicted eruption suggested by Dr. Bulkley had not occurred to him. The patient had been under observation for some time and seemed to be a perfectly normal woman in her actions. He hoped to have a biopsy made before the next meeting.

**Parapsoriasis.** Presented by Dr. FORDYCE.

The patient was a young man about twenty-one years old who stated that he had had his present eruption for about seven years. It was pretty well generalized over the trunk and extremities, and consisted of scaling maculo-papular lesions varying in size from a split-pea to that of a finger-nail. The color was not pronounced. The affection itched slightly and was extremely resistant to treatment. It conformed to the class of cases described under the name of parapsoriasis.

Dr. LOUIS WICKHAM, of Paris, showed some drawings of histological sections, demonstrating the fibroid changes produced by radium, without any burning; first on a case of vascular nævus; second, on a case of a very large vascular tumor; third, on a case of carcinoma of the breast. These histological researches had been made by Dr. Wickham with the collaboration of Dr. Degrais and Dr. Gaud. The clinical features of these cases would, Dr. Wickham said, be demonstrated at the Academy of Medicine on the third of November, when the speaker would deliver a lecture on the effects of radium on tumors.

Dr. Wickham said he had been doing some research work in order to discover the best means of treating telangiectasis produced by radio-dermatitis, and thought that the solid carbon dioxide might produce good results, if the applications were very mild; the application of the snow should not last for more than three seconds. Six years ago he applied radium to his own arm and produced a telangiectasis, producing four places which were extremely deeply colored. Then he applied the solid carbon dioxide to take them off, and the members of the Society could see for themselves the result. The places were whitened in a satisfactory manner, and were not too shiny.

Dr. HOWARD FOX presented a moulage of a case of acquired onychogryphosis to contrast with a moulage of onychogryphosis congenita which he had previously shown before the Society. The cast had been obtained from a woman eighty-three years of age. As a child, three of her toes had been severely bruised by a heavy beam. Following this injury the nails of the great and first and second toes of the right foot had fallen and had, since that time, shown a tendency, when allowed to grow, to assume the characteristic appearance of onychogryphosis.



REVIEW  
of  
DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MacKEE, M.D.

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SYPHILIS OF THE SKIN AND MUCOUS MEMBRANES,  
ATROPHIES, HYPERTROPHIES, BENIGN AND  
MALIGNANT NEW GROWTHS.

By UDO J. WILE, M.D., New York.

Concerning Gummatous Lymphomata. HUGO FASAL, *Arch. f. Dermat. u. Syph.*, 1910, ciii, No. 2, p. 3.

Fasal calls attention to the fact that although the lymphatic system is frequently involved in the secondary stage of syphilis, tertiary lymph gland disease, is very rare. He cites the cases described in the literature and includes four observations of his own. In all of his cases the sub-maxillary glands were those involved, whereas the largest percentage of the cases in the literature show the groin as the site of predilection. The author believes there is a direct relation between the topography of the lesions and the site of earlier manifestations. In one of his cases there had been a tonsillar chancre of the same side, in a second the mouth was the probable site of the primary infection, and in the remaining two cases, buccal mucous membrane lesions recurred frequently. The frequency with which the peno-scrotal region is affected in the primary and secondary stages of the disease, readily accounts for the relative frequency of the occurrence of gummatous lymph glands in the inguinal region.

Concerning Maculæ Atrophicæ with Especial Reference to Two Cases Occurring in Lues. CARL BOHAC, *Arch. f. Dermat. u. Syph.*, 1910, ciii, No. 2, p. 183.

Concerning the ætiology and pathogenesis of the above-named dermatosis, the author finds no unanimity of opinion among the other writers on this subject. The hitherto described cases in the literature, the author proposes to classify as follows: In the first group, are the cases of idiopathic atrophia maculosa cutis (anetodermia erythematodes) of Jadassohn and Heuss. In the second group are those cases of atrophy

which follow certain inflammatory diseases, such as urticaria, urticaria pigmentosa, purpura atrophicans, scleroderma, acne, lichen planus, lupus erythematosus, etc. In a third group are the rare cases of atrophic macules, in which there has been no previous inflammatory stage, and in which hypothetically trophoneurotic disturbances are thought to be the cause. A fourth group includes those cases of connective tissue tumors, associated with atrophia maculosa cutis. Finally a fifth group, which includes the cases of lues which may be followed by macular atrophy of the skin.

Bohac summarizes briefly certain examples of each of these groups from the literature. The two cases reported by himself, are extremely interesting. In the one, associated with typical gummatous scars, there were scattered over the whole body numerous scar-like atrophic lesions. In the second case the atrophic lesions followed a pustular and licheniform syphilide. Both cases were thoroughly studied histologically, and Bohac concludes from his studies, that true maculæ atrophicæ, histologically characterized by disappearance of elastic tissue, do occur after resorption of certain syphilitic lesions, in opposition to the belief of Heuss and others that such lesions are pseudo-atrophic and due to the tearing and thrusting aside of the elastic tissue.

**Iritis Papulosa Annularis.** CARL CRONQUIST, *Arch. f. Dermat. u. Syph.*, 1910, ciii, No. 2, p. 181.

Cronquist reports a most unusual case of eye syphilis. The patient, suffering with primary and cutaneous secondary manifestations of syphilis, showed also a rare form of iritis. On the pupillary margin of the left eye, and almost encircling the iris, was a row of pinhead to hemp-seed-sized, yellowish-red papules. Cronquist calls attention to the fact that such lesions are usually not multiple when they occur at all, which is extremely rare in secondary syphilis. The case report is accompanied by an excellent colored plate showing the extent and the situation of the lesion, which makes the case, according to the author, unique in the literature.

**Concerning Sarcoma-Like Skin Tumors.** R. POLLAND, *Arch. f. Dermat. u. Syph.*, 1910, civ, No. 1, p. 69.

Under the name of "sarcoma-like tumors of the skin," the author includes cases of mycosis fungoïde, forme à tumeurs d'emblée, multiple hæmorrhagic sarcoma (Kaposi), and the sarcoid or so-called lupoid tumors of Boeck and Darier. In addition to these, however, there is a group of cases which are characterized clinically by circumscribed growth, the ability to involute spontaneously, absolute benignity, and absence of metastases. Histologically, these tumors show small cell infiltration of

the cutis without any destruction of the cutis itself or of the adnexa. The epidermis and the papillary layer of the cutis are unaffected except by pressure of the infiltrate from below. After the disappearance of such tumors, which occur not only as nodules but also as flattish infiltrations, pigmentation and, at times, an atrophic scar remain. Such cases as these have been described in the literature by Spiegler (*Arch. f. Dermat. u. Syph.*, xxvii, p. 163), by Max Joseph (*Arch. f. Dermat. u. Syph.*, xlvii, p. 177), and by the author himself in this paper. The sarcoid or lupoid tumors of Boeck and Darier, the writer believes, must be regarded as unusual forms of skin tuberculosis, as their histology indicates, and their identity as well as that of mycosis fungoïde, forme à tumeurs d'emblée cannot be confounded with the tumors under discussion, for which he proposes the designation "sarcomatosis cutis (Spiegler)." after the name of the original observer.

**Proliferating Sebaceous Cysts.** W. DUBREUILH and L. TRIBONDEAU, *Ann. de dermat. et de syph.*, 1910, i, Nos. 8 and 9, p. 417.

Dubreuilh and Tribondeau report a number of cases of sebaceous cysts in which accessory cyst formation was noticed. Their studies in this paper have to do with the histogenetic origin of such accessory cysts, and to this end they made extensive histological examinations of such neoplasmata in five cases. Their studies lead them to the following conclusions:

1. Atheromata are capable of secondary budding, and in such instances merit the name of "proliferating wens."
2. This proliferation gives rise to secondary cysts, placed in the neighborhood of the mother cyst.
3. The proliferation is most often limited to a single localized portion of the wall.
4. The proliferation is, however, at times intense and generalized, giving rise, in such instances, to lobulated multilocular tumors, differing thus from the ordinary wens which are round and unilocular.

The article is accompanied by excellent cuts illustrative of the various histological pictures studied.

## BACTERIOLOGY AND PARASITOLOGY.

By R. C. JAMIESON, M.D., Detroit.

Cutaneous Trichophylin Reaction. SAMUEL AMBERG. *Jour. Exper. Med.*, July, 1910, xii, No. 4.

The action of the trichophyton has always been supposed to be only local, but recent experiments in cases of trichophyton profunda would lead one to think that the infection leads to changes in the organism aside from local skin lesions. Patients having trichophyton profunda respond to subcutaneous injections of culture filtrates (trichophylin) with local and general reaction. Local reaction consists of inflammation and infiltration at the point of injection; general reaction consists of malaise, headache, muscular pains, rise of temperature, etc. Superficial cases do not give this reaction. It is analogous to the tuberculin reaction and is not observed in cases suffering with disease not caused by hyphomycetes of the trichophyton group.

Trichophylin is prepared by growing the organism on 3% maltose bouillon for 2 to 3 months at room temperature. The growth is then removed and ground up with a glass rod and filtered. The filtrate is then mixed in a 25% solution of carbolic acid.

Reaction: After from 4 to 24 hours a flat, red papule, the size of a pea, appears, accompanied by violent itching. In the following 24 hours it increases somewhat in size and recedes slowly during the next few days. The method of vaccination was the same as that used by von Pirquet in the tuberculin reaction.

Healthy individuals never give a positive reaction, but a reaction may be positive even after the patient is cured, although the disease may not have been in evidence for years.

The analogy between the cutaneous trichophylin reaction and the tuberculin reaction is marked, as both indicate that the organism is the seat of a definite infection, or has passed through such an infection and both reactions may persist long after the active disease has disappeared.

A positive reaction may be of diagnostic value, but when negative it may be more valuable, as it excludes the existence of specific infection.

A Theory as to the Origin of Leprosy. JOHN ATCHERLEY. *Med. Rec.*, New York, Aug. 5, 1910, lxxviii, No. 6, p. 231.

The conclusions are based upon the hypothesis that leprosy is analogous to scurvy, pella, podagra, tuberculosis and urticaria, or, in other words, to the group admitted to have its origin in improper food.

He believes it is not contagious and not hereditary, as he has found that infants are never lepers, the earliest age being five years, or about

the length of time it would take to develop the disease when a child is improperly fed. His arguments for non-contagion are—no epidemics, failure of segregation and frequent spontaneous cure. Variations in the disease can be explained by change of diet or residence. He cites a specific instance of food causing leprosy during a famine in the Philippines. No food was obtainable except clams, and a number of the natives developed leprosy, but no more cases developed when the famine ceased.

He characterizes leprosy as a "chronic dietetic disease, gradual in its onset and running an irregular course, with inflammatory fibroid degeneration of nerve tissue."

Regarding the *lepra bacillus*, he says that it is the *result* of the disease and not the *cause*, as the organisms are deposited in the track of the peripheral nerve trunks following the nerve degeneration due to defective food supplied by the blood.

The improper food may be due to an excess of poisonous material containing virulent microorganisms and their products, or to a restricted diet lacking in some essential elements.

Sea beaches or islands best supply the conditions necessary to make the food of improper variety.

He concludes by saying that his theory accounts for the improvement when a leper is removed from the place where he contracted the disease, and also why cases are found away from the sea. It also explains the presence of the *bacillus* and why it is a result and not the cause of leprosy.

#### A Note on the Distribution of *Treponema Pallidum* in Congenital Gummata. ERNEST A. SHAW. *Lancet*, July 2, 1910, clxxix, No. 4531, p. 26.

The author states that in his search for undoubtedly congenital syphilitic livers, he found many that were studded with gummata. Sections of the livers showed that the *spirochætæ* were far more abundant in those sections containing gummata than in those not containing them. He gives a description of the microscopical appearance of a gumma as follows: "One section had a black band at the periphery which was found to be a dense, felted network of *spirochætæ* lying at every possible angle and overlying each other like handfuls of pins." He found in his study that the number of organisms diminished slightly from the outer zone inward, but diminished rapidly outward until healthy tissue was reached and were very infrequent even 1 mm. from the gumma.

He concludes that a gumma starts as a colony of *spirochætæ*, which colony gradually spreads with an encasing capsule of *spirochætæ*. As it grows, the nutrition of the centre is impaired and gradually breaks down, forming a half necrosed area no longer containing typical organisms.



## PATHOLOGY.

By CHARLES J. WHITE, M.D., Boston.

## The Chemistry of the Skin. Part V. The Fat of the Horny Layer.

UNNA and GOLODETZ, *Monatsh. f. prakt. Dermat.*, 1910, 1, p. 95.

The article continues the minute chemical studies which the authors have made and published during the last few years. They summarize their findings in the present instance as follows:

1. Oleic acid and its compounds reduce osmic acid; other fatty acids do not.
2. Oleic acid owes its ability to reduce osmic acid to its unsaturated condition; this power disappears after saturation with bromine.
3. Albuminous substances, such as protoplasm and horny matter, absorb osmic acid without reducing it, and the combination is stained green. This resulting combination can be colored black by a reducing element.
4. The principal seat of the oleic acid is in the basal horny layer.
5. Between this layer and the stratum granulosum there is a unicellular layer, the infra-basal layer, which does not reduce osmic acid and does not contain oleic acid.
6. This layer, however, gives the reaction of glycogen and this glycogen is apparently combined with a proteid, glykoproteid.
7. The source of the oleic acid of the basal horny layer is probably from this glycogen.
8. The fat stains. Sudan, Scharlach and Fischler, give a sufficient explanation of the black ring of the osmium pictures.
9. The fat of the horny layer is composed of free oleic acid, which exists principally in the basal stratum corneum and the degenerated cells of the sweat duct, and of fatty acid esters which appear but in proportionately lesser amounts in the other levels of the horny layer.

## Biological Investigations of the Role of the Staphylococcus in Eczema.

C. BRUCK and S. HIDAKA, *Arch. f. Dermat. u. Syph.*, 1910, c, p. 165.

From their studies the writers come to the following conclusions:

1. The degree of agglutination of eczematous sera toward staphylococci is greater than that of normal sera.

2. The antilysin power of eczematous sera is markedly larger than that of sera from men free from staphylococcus processes.

From these conclusions it is apparent that staphylococci in cases of eczema can produce biological reactions which consist of an increase in the agglutinins as well as the antilysin content of the blood and furthermore the chronicity and severity of the eczema influence these antibody productions. From these facts it is evident that staphylococci cannot be regarded as harmless parasites in cases of eczema.

Concerning Lime Metastases in the Skin. J. JADASSOHN, *Arch. f. Dermat. u. Syph.*, 1910, c, p. 317.

A previously healthy boy of twelve years received a severe blow on the chest and back as the result of a fall. Pain was present for 8 to 12 days and a big thirst and slight loss of weight resulted. Later, malaise, long-continued vomiting, anorexia, and fever supervened. The skin became dry and subsequently small red nodules developed, followed by similar lesions on the shoulders and elbows. Two weeks later a network of prominent lines formed, accompanied by vesicles, pustules, abscesses, and pruritus. An X-ray examination revealed great disturbances in the pelvis and over the knee there was a dark line in the skin. Two weeks before the boy's death Jadassohn found the following changes in the skin: On the shoulders, elbows, thighs, and knees, there were large plaques with rough surfaces and normal color. There was a fine network of yellowish-white lines, between which appeared enlarged follicles. The plaques felt firm and the overlying skin could not be picked up easily. There were no marked subjective symptoms.

The autopsy showed an osteomyelitis, endocarditis, multiple abscesses in the lungs, myocardium and kidneys, ostitis rarificans, and lime deposits in the endocardium, lungs, kidneys, and skin.

Histology of skin. The epidermis contained leucocytes, mitoses, intracellular edema and abundant pigment in the basal cells as well as in the papillæ. The epidermic cells were stretched and broken by chalk masses and here inflammatory signs were present. In the cutis appeared a few mast cells, pus cells near the abscesses, together with staphylococci. Abscesses were present in the deeper layers. The fibrin stain revealed a small network of fibrin in several lymph vessels and spaces, especially near the abscesses. The blood vessels here and there showed thickening of their walls and hyaline degeneration. The sweat glands and ducts were normal except where pressed aside by the chalk masses. Chalk appeared as small or large collections of very irregular size and shape. Nitrate of silver colored these masses totally black, but outside appeared branching elements which proved, by the

orcein and Weigert methods, to be inspissated elastic fibres. These altered elastic fibres were present in the vascular tissue also. The black-stained chalk was found in the epidermis also.

Conclusions. This strange process begins as a calcareous imbibition of the elastic fibres which later swell, and break. These changes are followed by the degeneration and calcification of collagen and finally inflammation appears.

#### RESOLUTIONS OF RESPECT TO THE MEMORY OF DR. FILIPP JOSEF PICK BY THE NEW YORK DERMATOLOGICAL SOCIETY.

By the death of Professor Filipp Josef Pick of the German University of Prague on June 3, 1910, at the age of seventy-six years, the New York Dermatological Society has lost one of its Honorary Members. Pick was one of the most prominent exponents of the German and Austrian school of dermatologists and in various ways of the greatest influence on its development. A pupil and private assistant of Hebra he went to his native country, Bohemia, in 1866 to practice and teach dermatology at Prague where this discipline had heretofore been entirely neglected and many obstacles and difficulties awaited him. Still, after he had become Privatdozent in 1868 and Extraordinary Professor of Dermatology in 1873, he succeeded by persevering and intelligent efforts in having established in Prague one of the finest dermatological clinics, and in 1896 he was created Ordinary Professor of Dermatology, the first one to obtain that rank in Austria.

Pick's contributions to dermatological literature are numerous and of great value, but he was probably best known and appreciated by dermatologists of all countries as the Editor of the *Archiv für Dermatologie und Syphilis*, which he had founded with Auspitz in 1869 and continued after Auspitz's death up to his own death. The publication of the *Archiv* was his favorite work and he was always zealously watching to keep it up to the highest standard. And indeed the more than 100 volumes which have appeared under his editorship will always remain a glorious monument of his life's work.

Pick was the founder of the German Dermatological Society in 1888 and presided over its first Congress at Prague in 1889. Here his personality largely contributed to the success of the meeting, since which time he has constantly been high in the councils of the Society, being its president at the time of his death.

Pick was probably personally not so well known to American dermatologists as his Viennese colleagues, but he always took great interest in the work of American dermatologists and was anxious to have it represented in the *Archiv*. He had been looking forward with great pleasure to a visit to America on the occasion of the Sixth International Congress of Dermatology in 1907 and actually had engaged passage on a German steamer when at the last moment he was detained by serious illness in his family.

H. G. KLOTZ, M.D.	} Committee.
S. SHERWELL, M.D.	
G. H. FOX, M.D.	
C. T. DADE, M.D.	

## BOOK REVIEWS

**Traité de la Syphilis.** By DR. H. HALLOPEAU, Professor Extraordinary to the Paris Faculty of Medicine; Emeritus Physician, St. Louis Hospital; Member of the Paris Academy of Medicine; and DR. CH. FOUQUET, Ex-Chief of the Dermatological and Syphiligraphic Clinic of the Paris Faculty; Physician to the Out-Patient Department, St. Louis Hospital. 436 pages, Paris, *J. B. Baillière et fils*, 1911.

This is not a very auspicious moment for publishing a treatise on syphilis, because we are on the eve of a revolution. Drs. Hallopeau and Fouquet's work will certainly be the last of the "ante-606" books.

But do not jump at the conclusion that it is not an up-to-date book. Indeed, when one reads it and compares it with the best books of five years ago, one realizes keenly what tremendous progress has been made during that time. The clinical description is about the only one that has not changed much. The parasitology and the serology are brand new chapters, the diagnosis has been thoroughly modified, and the treatment has been changed considerably.

All these changes are well exposed in Hallopeau and Fouquet's book, so that, with the addition the new and interesting chapter that "606" will add, little would be left to be decided by the student who wants to know the exact present status of the question. The book is particularly rich in facts. The newer aspects of syphilis and the question of parasyphilis, are extensively treated.

From the standpoint of treatment, Hallopeau advocates early intensive, abortive treatment with hectine, an arsenical compound somewhat similar to "606." We may not all agree with him as to the value of that particular drug, but the principle of such treatment meets with a pretty general approval.

It is not possible to analyze each of the chapters; suffice it to say that the reader will find therein a very fair exposition of the French medical world on syphilis, with many valuable personal ideas added.

F. E. G.

**De l'Usage en Clinique de l'Ultra-Microscope, en Particulier pour la Recherche et l'Etude des Spirochètes.** Par le DR. J. COMANDON, Paris, *G. Steinheil*, 1909.

The author has given us a small volume of one hundred and fifty-eight pages dealing with the use in clinical medicine of the ultra-microscope, with particular reference to its usefulness in the study of spirochætæ. For those interested in the micro-biology of syphilis, this little volume will prove very valuable.

The book is divided into ten chapters: the first chapter deals with the physical principles of the ultra-microscope and the general directions concerning the technique of examination. Chapters 2, 3, 4, 5, and 6, deal with the examination, characteristics, and differential diagnosis of the spirochæta pallida as found in the various lesions of syphilis, likewise a very complete description of other spirochætæ which may be encountered when examining fresh specimens made from syphilitic lesions. Particularly interesting are the author's findings in his researches to determine the vitality of the spirochæta pallida. Although he was able to see, by means of the dark-field, the organism in preparations made from a syphilitic infant many months after death, he states that never was he able to discern living spirochætæ in any of the many cases of heredo-syphilis examined, later than one hour after death. His examinations in such cases were conducted either

24 or 48 hours post-mortem. The results of the author's inoculation experiments are described in chapter six; of twelve rabbits inoculated with syphilitic material, nine developed lesions at the site of the infection. In the seventh chapter are recorded the observations on 29 patients in whom a doubtful clinical diagnosis was cleared up by a micro-biological examination with the aid of the ultra-microscope. The remaining three chapters take up the use of the ultra-microscope in the study of the blood, semen, milk, urine, and pathological exudates, as well as the new field opened by it in the study of bacteriology and parasitology.

There are two plates of instructive photomicrographs and several cuts illustrating the physical principles and the types of apparatus employed. The bibliography is very complete.

U. J. W.

### BOOKS AND REPRINTS RECEIVED.

*Books marked with an asterisk will be reviewed.*

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Bericht über die bisherigen Resultate der Behandlung der Syphilis mit dem Präparate von Ehrlich-Hata. By DR. WALTER PICK. (Reprint.) *Wien. klin. Wchnschr.*, 1910, xxiii, No. 33.

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Zur Kenntnis des senilen Angioms und seiner Beziehungen zum Endothelium. By DR. WALTER PICK. (Reprint.) *Arch. f. Dermat. u. Syph.*, 1909, cix, Nos. 1 and 2.

Neuere Methoden der Dermatotherapie. By DR. WALTER PICK. (Reprint.) *Med. Klin.*, 1910, No. 15.

Roentgen Index, July 1909 to June 1910. By DAVID R. BOWEN, M.D. (Reprint.) *Am. Quart. Roentgenol.*, Sept. 1910.

Beiträge zur Behandlung der Syphilis mit Ehrlich-Hata "606." By DR. W. FISCHER. (Reprint.) *Med. Klin.*, 1910, No. 45.

Hautkrankheiten bei Gonorrhoe. By DR. A. BUSCHKE. *Sonderabdruck aus dem Handbuch der Geschlechts-Krankheiten*, Wien, 1910.



# THE JOURNAL OF CUTANEOUS DISEASES

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## PELLAGRA IN OHIO: WITH REPORT OF A CASE.\*

WILLIAM THOMAS CORLETT, M.D., L.R.C.P., London.

Professor of Dermatology and Syphilology,

and

OSCAR THEODORE SCHULTZ, M.D.,

Assistant Professor of Pathology, Western Reserve University, Cleveland.

UNTIL quite recently pellagra has been regarded as a disease limited to certain countries, mainly Italy, Spain, southern Austria and the Roumanian district, together with Egypt. Isolated cases, it is true, have found their way into this country, but not in sufficient numbers to obtain general recognition, nor to menace the health of its inhabitants. It is natural, therefore, that the report of a large number of cases of this disease occurring in this country should be received with some incredulity. Through the medical press physicians were aroused as to the possibility of pellagra existing in their several communities, and the lay press was not slow in publishing exaggerated reports and wild rumors concerning its magnitude. Naturally with this general awakening many suspected cases proved on examination to be ordinary affections. The following may be given as an example of some of these cases:

W. K., male, aged sixty-four, American, a marine engineer until two years ago when he took up the occupation of farming. About a year before the patient came under observation, in November, 1909, he developed a severe dermatitis on the dorsal surfaces of the hands, lower half of the forearms and face, which resisted the various forms of treatment employed (Figs. 1 and 2). The patient attri-

\*Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

buted the disease to the effect of "corn smut" with which he had come intimately in contact in husking corn the day preceding the outbreak. He further said that on account of the warm weather he had perspired freely and that the "corn smut" which was abundant was thus intimately brought in contact with the skin. The case was admitted into the Lakeside Hospital as eczema. While in the hospital the eruption extended over the whole cutaneous surface, the palms and soles excepted. No constitutional symptoms were complained of nor observed, and after nearly three months the patient was discharged greatly improved but thought to be not wholly free from the disease. Soon after returning to his home, in January, he suffered a slight relapse and has since passed out of observation. No thought of pellagra was at any time entertained, but it was regarded as an inveterate eczema probably due to environment and unusual occupation.

During the year 1909, two of the larger State hospitals for the insane in Ohio and one home for incorrigibles reported epidemics of some peculiar disease of the skin, the nature of which was in doubt. Investigation showed the so-called epidemics to be made up of various diseases of the more common sort and especially those most readily communicated in communities of this class of people. Nothing that suggested pellagra was seen.

All doubt as to the existence of pellagra in this country was removed, however, on visiting the State Hospital for the Insane at Peoria, Illinois, in October, 1909. Although it was not the time of year when exacerbations are most marked, yet the entire day was spent in seeing cases of unmistakable pellagra in varied degrees and stages of the affection.

In comparing these cases with those we have seen in other countries, one must take into consideration that all the Peoria cases had been adjudged insane, and many were in an advanced stage of pellagra, while most of the cases previously seen were able to follow their usual vocations. This, together with the distribution of the cutaneous lesions, constitute the chief differences noted. In the West Indies and especially in Egypt one frequently encounters pellagra, but not being familiar with the people their mental condition could not be definitely determined, especially in a casual observation such as we have made. Thus the disease has always seemed to be less intimately associated with insanity than the cases seen in this country would imply. This tends to substantiate the claim that

pellagra, as is true of syphilis and some of the infectious exanthemata, is more severe and shows a greater predilection to attack the nervous system when first it appears in a country hitherto free. Concerning the distribution of the skin lesions, one must remember that in hot countries more of the body is exposed to the sun's rays, notably the chest, arms and legs, and what seems to be a result of this exposure is the wider distribution of the cutaneous manifestations of pellagra. Aside from these minor differences the affection as observed in this country seems identical with that seen abroad.

In Ohio, so far as we know, the only case of pellagra reported occurred in the Cleveland City Hospital. The patient, who had been admitted some days before, complaining of vomiting, presented certain peculiar lesions of the skin. The hospital records showed that the patient had twice before been admitted. The first time was on March 28, 1906. The history of the case at that time is as follows:

**FAMILY HISTORY.** A female, aged forty, a native of Germany, had lived in this country since childhood and with the exception of four years in Illinois, had been a resident of Cleveland. She is married and is the mother of four children, two having died in childhood of diarrhœa while two are still living. Her father is living and well, as are two sisters and a brother. The mother, it is thought, died of Bright's disease. No history of tuberculosis, cancer, or nervous disease could be obtained.

**THE PREVIOUS HISTORY** shows that she has had rheumatism, has always been subject to headaches, and sometimes to dizziness. The appetite is poor and bowels constipated. No cough or expectoration is complained of. Slight burning on urination; no abnormal frequency. The menstruation started at sixteen years of age and has been irregular and copious. She has had two miscarriages, the last about six months ago. She uses coffee freely, but no alcohol. Average weight about 130 pounds.

**PRESENT CONDITION.** The patient is weak and frequently nauseated and dizzy. The feet are usually cold. She says she takes cold very easily during the winter and has been losing weight.

**PHYSICAL EXAMINATION.** The patient is emaciated, poorly developed, and both body and skin have the appearance of an old person. No mention is made of any other changes in the skin aside from its being anæmic and pale.

THE EYES are normal; the pupils react to light and accommodate to distance. The conjunctivæ are slightly icteric.

No special changes are noted in the mouth excepting that the upper teeth are decayed. Nothing of note is found in the lungs, heart, liver, or spleen.

THE STOMACH is dilated and extends to one finger's breadth above the umbilicus. The Hippocratic succussion splash was obtained.

THE PULSE at the radials is hard and the vessels are somewhat tortuous and markedly sclerotic for a patient of this age.

THE REFLEXES are active.

THE URINE is acid, sp. gr. 1009, no albumin nor sugar. Diazo negative. Occasional leucocytes and epithelial cells.

(March 31, 1906.) Sputum negative for tuberculosis.

(March 31, 1909.) Sputum negative for tuberculosis.

The patient was discharged from the hospital April 10, 1906, having remained only thirteen days.

She was again admitted May 11, 1906, complaining of increasing dizziness, and was discharged June 2, 1906. During this time the sputum was repeatedly examined for tuberculosis with a negative result.

The patient was admitted the third time on October 27, 1909. Notes of her condition since last discharged show that she has had headaches almost constantly during the past year. The appetite has been poor, the digestion bad, and the bowels constipated. She has been vomiting intermittently for three or four days each week during the past three or four years. She often vomits before breakfast, also after meals. There is no pain, but a heavy feeling which is relieved by vomiting. There has been no hæmorrhage.

PHYSICAL EXAMINATION. The nutrition is very poor. There is marked emaciation. The muscular system is markedly atrophied.

THE SKIN AND MUCOUS MEMBRANES show some anæmia. There is no œdema, cyanosis nor icterus. The skin is white, harsh, dry, and scaly. There are white pigmented spots in the mouth under the tongue. There is brown symmetrical pigmentation on the dorsal surfaces of both hands.

THE GLANDS are all palpable except the epitrochlears.

EYES. The pupils are small, equal, round; react sluggishly to light and accommodation.

THE TONGUE is moist and protrudes with tremor toward the left side.

IN THE LUNGS the note is shorter and duller at the right apex, anteriorly down to second and posteriorly to fourth space. *Fremitus* is somewhat increased over this area. Breathing is harsh and respirations slightly prolonged.

HEART. Second aortic accentuated.

THE PULSE is regular, rhythmic, of fair volume and high tension. Arterial wall thickened.

ABDOMEN is rigid; no tenderness, masses, nor free fluid.

TEMPERATURE SENSE normal, as are the sensations of touch and pain.

Neither the liver, spleen, nor kidneys are palpable.

THE KNEE-JERKS are exaggerated. All reflexes exaggerated. No Babinski nor ankle-clonus.

STOMACH CONTENTS. Ewald meal, removed in one hour, 30 cc., thick-yellow fluid with particles of bread. Combined acid 10. No free acid; benzidine reaction slowly positive. Microscopic examination shows food particles, starch, many organisms, and yeast. The following day the stomach contents showed a thick yellow fluid with food particles and some mucus. Faintly acid, no free hydrochloric; total acid 20. Benzidine reaction positive. Lactic acid present. Microscopic examination revealed a few bacteria, oil globules, meat shreds, and yeast.

SPINAL FLUID. There were 3.5 cc. removed without pressure; clear, no cells.

BLOOD EXAMINATION. Hemoglobin 80 per cent. (Tallquist). White blood cells, 6,600; red blood cells, 3,900,000.

(Feb. 6, 1909). DIFFERENTIAL BLOOD COUNT:

Polymorphonuclears, 80% ;

Large mononuclears, 5% ;

Small mononuclears, 9% ;

Eosinophiles, 1%.

Red cells stain evenly but are rather pale. Central pale area somewhat exaggerated. Blood platelets decreased. No polychromatophilia, no poikilocytosis, no nucleated reds, no parasites.

(Feb. 18, 1909). DIFFERENTIAL BLOOD COUNT:

Polymorphonuclears, 75.3% ;

Large mononuclears, 8.3% ;



Small mononuclears, 12.6%.

Eosinophiles, 3.3% ;

Mast cells, .3%.

Red cells stain evenly but very pale. Central pale area exaggerated. Blood platelets decreased, no polychromatophilia, no poikilocytosis, no nucleated reds, no parasites.

When seen by the present writers, November 12, 1909, the patient was comatose and seemed in a very low condition; she had difficulty in retaining food and was greatly emaciated. The breath was offensive; stomatitis was marked with slight fissures at the angles of the mouth; the tongue was red and glossy with deep transverse fissures. On the backs of the hands and extensor aspects of the wrists the skin presented a dark, slightly corrugated appearance, which was dry and slightly scaly (Figs. 3 and 4). No irritation was complained of nor was there any evidence of scratching. The skin had the appearance of having been repeatedly and for a long time inflamed, with a marked deposition of pigment. Changes in the skin, although to a less extent, were also noted on the elbows and neck. On the latter as well as on the face, the skin bore evidences of certain changes which looked as if it had been repeatedly subjected to a mild form of inflammation. This observation was confirmed by members of the family, who said on questioning that the patient had often had a breaking out on the face and neck, although less severe than on the backs of the hands. Being questioned as to the use of Indian corn, they said she was fond of it and had partaken of it freely, but denied that it had ever formed the main constituent of her dietary. The diagnosis of pellagra was made:

FIRST, because the skin lesions looked like those of pellagra.

SECOND, because the stomatitis had the appearance, especially the deep fissures and glossy plaques on the tongue, of having existed for a long time.

THIRD, the gastrointestinal disturbances had been complained of for at least five years.

FOURTH, the patient's mental state had been, so far as we were able to ascertain, markedly impaired.

The patient gradually failed and died on the 19th of November, one week after the case first came under observation.

## PATHOLOGICAL EXAMINATION.

For the notes of the gross pathological findings, as well as for material and sections, we are indebted to Dr. W. D. Bretz, of the City Hospital Resident Staff, who performed the autopsy. Microscopic examination has shown the more obvious alterations in the skin to be such as one would expect to find after a persistent erythema. In addition, careful study has brought to light certain changes in the nerves which are worthy of mention, since they give a clue to the production of the more evident lesions of the skin. If examination of other, particularly earlier, cases shall establish the constant occurrence of the nerve lesions noted, a slightly deeper insight into the pathogenesis of certain of the alterations which occur in pellagra will have been gained.

## GROSS AUTOPSY FINDINGS.

**EXTERNAL EXAMINATION.** The length of the body is 124 centimetres, the weight approximately 90 pounds. There is present a marked degree of emaciation, with disappearance of the subcutaneous fat. The skin of the entire body is dry and tightly stretched. All the muscles are considerably atrophied. The dorsum of each hand shows a dry, pigmented skin lesion, extending 2 centimetres above the wrist joint, the upper border being sharply defined at its junction with the neighboring more normal skin. The lesion of the right upper extremity is mostly confined to the dorsum of the hand and the lower part of the extensor surface, but the left shows in addition a slight area on the radial side of the flexor surface. The skin is very dry, rough, and fissured, and has a dirty brownish color. Both lesions are symmetrical (Figs. 2 and 3).

**LUNGS.** The upper lobes are crepitant, the lower portions of the lungs being considerably firmer. Upon section the upper lobes are œdematous; the lower lobes are consolidated, congested, and œdematous.

**THE HEART** shows little except pallor of the muscle. The right side is dilated. The root of the aorta contains numerous sclerotic plaques.

**THE SPLEEN** weighs 205 grams and measures 11.0 by 7.5 by 4.0 centimetres. It is slightly adherent to the stomach. The capsule is thickened by an old perisplenitis. The splenic tissue is soft and pale and tears easily. The Malpighian bodies are not visible.

THE LIVER, which weighs 1,242 grams, measures 18.0 by 19.0 by 7.0 centimetres. The cut surface shows some congestion and a few punctate areas of hæmorrhage.

THE KIDNEYS show nothing except pallor of the cortex.

THE GASTRIC MUCOSA shows numerous small, pea-sized, elevated areas, some of which are hæmorrhagic. Between these polyp-like elevations the mucosa is pale, thin, and glistening. The pylorus is much thickened; its orifice small. The intestines are apparently normal. The mesenteric lymph glands are slightly enlarged, pale, and firm.

THE UTERUS and tubes are normal; the ovaries atrophied.

THE BRAIN, whose weight is 1,240 grams, shows no macroscopic changes.

#### MICROSCOPIC EXAMINATION.

LUNG. There is a moderate degree of emphysema and most of the alveoli contain serum. Many contain a cellular exudate composed largely of polymorphonuclear leucocytes. A few lymphocytes are present, as well as desquamated, swollen alveolar epithelia in fair numbers. Some of the epithelial cells contain coarsely granular brown pigment. The cellular exudate is most marked in those alveoli immediately about bronchi. The latter contain sero-purulent exudate. The pleura is normal.

THE HEART MUSCLE is markedly fragmented. Many of the muscle nuclei are excessively large. Pigment is prominent.

AORTA. There is some diffuse sclerosis, together with nodule formation and beginning atheromatosis. In the media there is slight lymphoid infiltration about the vasa vasorum.

SPLEEN. The Malpighian bodies are small and sharply outlined. The pulp is dense, due to proliferation of the stroma rather than of the endothelium. Many of the vessels and trabeculæ are hyalin in appearance.

THE LIVER shows moderate central congestion. The connective tissue is normal and there is no fat. Many of the liver cell nuclei are unusually large and poor in chromatin, but not vacuolated.

PANCREAS. There is considerable congestion. The connective tissue is normal in amount. The cells of the acini are deeply stained. The islands of Langerhans are normal.

THE KIDNEY shows considerable cloudy swelling of the tubular epithelium, and some congestion.

THE SUPRARENALS are normal except for slight congestion. There is no increase in pigment.

THE ESOPHAGUS shows well-marked chronic inflammation of the submucosa, characterized by the presence of many lymphocytes, a few polymorphonuclear leucocytes, eosinophiles, and fibroblasts.

STOMACH. The mucosa, between the nodular areas noted at autopsy, is very thin and poor in glands. Some of the glands are dilated. The submucosa is thick and dense and contains a few scattered areas composed of closely packed lymphocytes. About the larger arteries of the submucosa and between the muscle bundles of the outer coats of the stomach there are foci of lymphoid infiltration. The walls of some of the larger arteries of the submucosa are markedly thickened. The nerves of the submucosa are composed almost entirely of elongated, spindle connective tissue cells; none of the essential elements are to be detected by the ordinary stains. In the lymph spaces of the outer layers of the gastric wall the endothelial cells are very large, cuboidal, completely filling the lumina of the spaces; the cytoplasm has a bluish tinge. In the pyloric region the submucosa is very thick and shows numerous lymphoid areas like those of the stomach wall. The submucosa is rich in small vessels which show marked endothelial proliferation. The vessel walls are markedly thickened, and about the larger vessels there is lymphoid infiltration, which is eccentric and nodular in some places.

Sections from the small intestine show some congestion of the mucosa and submucosa, slight desquamation of the epithelium and considerable hyperplasia of the endothelium of the small vessels of the submucosa.

In the mesenteric lymph glands the follicles are very small, but quite prominent because of the depth of stain due to the almost complete absence of germinal centres. Between the follicles the stroma is dense and prominent and there is considerable endothelial proliferation.

CENTRAL NERVOUS SYSTEM. In the cord and brain many of the ganglion cells are extremely poor in both extra- and intra-nuclear chromatin; they appear exhausted. In the sensory roots of the cord, particularly in the cervical and upper thoracic regions, a fair proportion of the ganglion cells are narrow and decreased in size.

In such cells the protoplasm is unusually dense, deeply stained with eosin and contains no Nissl substance. The nuclei are indistinct because of the practically complete absence of chromatin; they are decreased in size and irregular in outline; even the karyosomes may be free of chromatin. The change present in the ganglion cells is quite advanced, and very few stages intermediate between normal sensory ganglion cells and those which show the marked alterations noted are seen. In the brain stem and in the cerebral cortex similar granular, shrunken ganglion cells are seen. Whatever the cause which has produced these alterations, it has very evidently not acted upon the central nervous system uniformly. Ganglion cells immediately adjacent to those most markedly altered may appear quite normal. Furthermore, the sensory cells seem to have been injured to a considerably greater degree than the motor cells. The degree and the exact distribution of the central nervous system involvement can be determined only by an enumeration of the cells from all the various levels of the nervous system, a procedure for which there has not as yet been opportunity.

SKIN. Sections from the inner aspect of the radial side of the wrist show, microscopically, a quite appreciable thinning of the epidermis (Fig. 5). Over the summits of many of the papillæ the epidermis averages only six cells in thickness, exclusive of the markedly thickened horny layer. No typical cells of the granulosum type are present. Rather sharply the cells pass over into a superficial layer in which condensation of the cytoplasm has begun and in which the nuclei are very pale (*a*, Fig. 6). This layer passes over into one only a single cell thick in which the protoplasm is very dense, in which definite nuclei cannot be seen and in which the lamella takes a rather deep diffuse nuclear stain (*b*, Fig. 6). Situated upon this is the thickened stratum corneum (*c*, Fig. 6), whose structure varies somewhat in different areas. In places it is made up of numerous dense, completely keratinized lamellæ (*a*, Fig. 5). Elsewhere only the surface portion shows such a very dense structure (*b*, Fig. 5). Beneath this is a stratum of varying thickness composed of mesh-like lamellæ separated by spaces (*b*, Fig. 5; *c*, Fig. 6). In these œdematous areas the superficial keratinized zone contains shrunken, irregular nuclear remnants.

The papillæ are much shortened (*a*, Fig. 7), are of varying thickness and in some areas are almost completely atrophied (*d*, Fig.



6). Where papillæ are still present their capillaries are congested and the capillary endothelium is prominent (*a*, Fig. 7). These papillary capillaries can be traced downward to the superficial horizontal vessels of the corium; here, also, congestion and endothelial proliferation are present (*b*, Fig. 7). Where the papillary atrophy is least marked the amount of pigment in the stratum mucosum is moderately increased and in the papillæ, chromatophores are present in more than normal numbers.

Beneath the superficial zone of the corium, where the small vessels are prominent because of their endothelial proliferation, the tissue is dense and poor in nuclei. The collagen fibres are thick, many of them almost hyalin in appearance (*c*, Fig. 6). The sweat glands show no change. The elastic tissue, in the deeper regions, is normal. More superficially, many of the fibrils have disappeared, and of those present the majority appear broken and stain very poorly.

In the deeper corium (*c*, Fig. 5) the nerves are very definitely involved. The perineurium may be markedly thickened and rich in narrow, band-like connective tissue nuclei (*a*, Fig. 8). The nerves themselves show rather large numbers of small spindle nuclei, and most of them contain one to three or four deeply pink-stained, round, amyloid bodies (*b*, Fig. 8; *a*, Fig. 9). These are apparently very much swollen and markedly changed nerve fibres. The individual fibres, where they are still to be recognized as such, are increased in size (Fig. 9). With the proper stains only very few axis cylinders can be seen in the cross section of nerves of even considerable size; most of the axis cylinders have entirely disappeared (Fig. 9). Between the nerve and the perineurium is a rather wide space (*c*, Fig. 8).

The pathological changes noted may be summarized as follows:

The gross examinations showed nothing which could be considered very characteristic. The chief points to be recalled are the extreme emaciation, the symmetrical character of the skin lesions, the thickening of the pylorus and the nodular character of the gastric mucosa.

Histologically, also, there is, at first glance, very little that is striking. The skin lesion is atrophic in nature, the gastric mucosa shows a chronic atrophic gastritis, the wall of the stomach is the

seat of a chronic interstitial inflammatory process and many of the central nervous system ganglion cells appear exhausted.

The epidermis shows rather well-marked atrophy, due to the partial atrophy or almost complete disappearance of papillæ. In addition to the simple thinning of the cellular portion of the epidermis there is marked increase in the thickness of the horny layer, which in places is œdematous and shows nuclear remnants. The normal process of keratinization is disturbed, so that definite granulosum and lucidum layers are not formed. These latter changes are most probably the result of the preëxisting congestion.

In the corium there is also well-marked atrophy, with swelling of the collagen fibres and some disappearance of elastic fibrils in the more superficial layers. The disappearance of papillæ is probably the result of the mild chronic vascular inflammation. The most striking alteration is the combined chronic inflammatory and degenerative process in the nerves of the corium. This change is so advanced as to lead to the belief that the nerve alterations are most probably primary, and that the remaining conditions in both corium and epidermis are secondary.

Clinically, pellagra is characterized by symptoms referable to the central nervous system and to the gastro-intestinal tract and by lesions of the exposed skin surfaces. The present case offers a pathological basis for the clinical manifestations, and we believe that the underlying pathological alterations in the central nervous system, skin, and stomach have much in common. The changes in the epidermis and its underlying corium and those in the gastric mucosa and the subjacent submucosa have in common a superficial atrophy and a deeper chronic inflammatory process, the latter most marked about the blood vessels. In both situations the nerves show a combined chronic inflammatory and degenerative process which has led to the disappearance of many axis cylinders.

In view of the fact that pellagra is considered by many to be a toxic trophoneurosis, the nerve cell and nerve fibre changes in this case are of some importance. In our case there is, however, actual structural alteration, so that the term "trophoneurosis" is not exactly applicable. And whether the alterations noted are "toxic" or not cannot be determined. They are non-specific in nature and there is nothing in the local lesions to indicate the action of an infectious agent. Certainly the primary change, in this case

at least, would appear to be an involvement of the nervous system, which has led to a loss of ganglion cells and to a disappearance of axis cylinders in the peripheral nerves supplying the skin lesions and in those of the gastric submucosa. It seems to us proper to suppose that in this case something—whether an infectious agent or a poison not derived from a living organism we leave beside the question—has attacked primarily the nerve cells, and that the nervous system changes noted are sufficient to account for the group of symptoms which characterized the clinical history: mental impairment, gastrointestinal involvement and symmetrical skin lesions.

This case is thought to be one of more than usual interest because we are able to obtain a fairly complete history of the disease over a considerable period of time, and that the true nature of the affection remained undetermined. From the hospital notes and the information we were able to elicit from the family it seems evident that the skin and mucous membrane of the mouth had not received the attention they merited. The former was only casually mentioned on the last admission, and in both, their importance in diagnosis seems not to have been duly considered. Such cases are thought to be uncommon in Ohio, nor is it believed that unrecognized pellagra exists to any considerable extent. In conclusion, it is further thought that pellagra, while not wholly confined to certain regions of this country, yet its limitation is fairly well defined, and that, from the testimony of those who have seen most of the affection here, it is not entirely new.

#### DISCUSSION

Dr. Babcock said he appreciated the honor of discussing the interesting case reported in Drs. Corlett and Schultz' paper. The speaker said he understood, of course, that there was considerable skepticism in regard to the existence of pellagra in this country, and it was only those who had served in public institutions, particularly in the southern States, and who had been face to face with this condition for years, who could comprehend the importance of having more light shed upon this mysterious malady. A certain amount of the skepticism that had hitherto existed as to the actual presence of the disease in this country he thought had been removed. They had had cases in South Carolina in which the diagnosis had been doubted by the local physicians. Those cases had been thoroughly investigated by men like Dr. James Nevins Hyde of Chicago and Dr. Howard Fox of New York, and now there was no longer any doubt about the presence of pellagra in South Carolina and other States.

A year ago, Dr. Babcock said, a conservative estimate of the number of pellagra cases in the United States placed the number at 1,500. Recently, the figures had been gone over, and it now appeared that the disease had been

recognized in twenty-seven or twenty-eight States. While it was most prevalent in Virginia, South Carolina, and the Gulf States, cases of pellagra had been reported in two Illinois hospitals and subsequently in a third, and it had been shown beyond the shadow of a doubt that the disease existed in some of the western States, including California, so that we had now come to the conclusion that it had a very widespread distribution.

Dr. Babcock said that from personal investigation and inquiry he was satisfied that pellagra had existed in South Carolina for nineteen years, at least, while a physician with whom he was associated believed it had existed there for thirty years, and there were traditions of cases that went back as far as 1870.

Regarding the mooted question as to the causation of pellagra, the speaker said he did not think it necessary to discuss. Not only were the Italian authorities pushing their investigations along that line, but also the authorities of the United States Government, through Dr. Siler, of the Army, and Dr. C. H. Lavinnder, of the Department of Public Health and Marine-Hospital Service, while an English Commission was working along similar lines through Dr. Sambon. This work was largely being done in Italy, while in this country, a few months ago, Dr. John D. Long, of the United States Public Health and Marine-Hospital Service, was sent South and made some investigations of the cases there. He was particularly interested in the microscopic findings in the stools of pellagrins, which revealed the presence of certain intestinal parasites, as amœbæ, etc. In one case that came to autopsy Dr. Long also found some deposits in the foramina of exit of the spinal nerves which he thought might have some bearing on the symptoms in these cases.

Dr. Hyde said that Dr. Sherwell was properly credited with having made the first contribution on this subject to this Association. Dr. Hyde said that in his own paper on the subject, "Pellagra and Some of Its Problems," which was published in the *American Journal of Medical Sciences* for January, 1910, he had made the statement that "it was certain that those who had never consumed corn had had pellagra." Since then he had been in correspondence with Dr. S. M. Sandwith, who had called his attention to the fact that "durra," the original word for millet, is now also often used for maize. The natives did not confuse the two cereals but were usually too lazy to call maize, "durra shammy" (Syrian durra.) The speaker added that the statement made above was based largely upon his belief that the natives who ate durra and suffered from pellagra had not been consuming corn.

As bearing upon this subject from a historical standpoint, Dr. Hyde showed an original copy of a volume entitled "Historia Natural y Medica," by Dr. Caspar Casal, which was published in Madrid in 1762, and which, so far as was known, was the first contribution to the subject of pellagra. This book was so rare that a copy of it was not to be found in the Congressional Library or in the Library of the Surgeon General's office.

Dr. HOWARD Fox expressed his disappointment that he was unable to read a paper, as he had hoped, upon experimental serum therapy in pellagra. At the first Conference on Pellagra held in Columbia two years ago, Dr. M. Ray Powers presented a paper on epizootic cerebro-spinal meningitis in horses, in which he attributed the cause of the disease to the eating of damaged or mouldy corn. A number of veterinarians who had written on the subject and others with whom Dr. Fox had conversed held a similar opinion. As pellagra was supposed by most authorities to be due to eating mouldy corn, it seemed possible that the serum of an animal recently cured of the above-mentioned disease might be of curative value in treating human beings suffering from pellagra. Dr. Fox had found a mule recently cured from a severe attack of epizootic cerebro-spinal



meningitis or "blind staggers." The animal had kindly been sent by Mr. J. Swinton Whaley to New York, where it had been bled. Dr. Fox had intended to try the serum in a case of pellagra in the service of his father, Dr. George Henry Fox, at the New York Skin and Cancer Hospital. Dr. Babcock had promised to use the serum upon his cases at Columbia, although up to the present the new cases were slow in making their appearance, whereas the old ones had either gotten well or had died. As the treatment of pellagra in many cases was hopeless it seemed proper to attempt any method of treatment that was at all rational.

DR. BABCOCK, in reply to a question as to the mortality of pellagra, said that in one insane asylum for white people in the South, they had observed the disease, since 1896, in six men and twenty-one women—a total of twenty-seven cases, with eighteen deaths. At the Mt. Vernon Hospital, for the negro insane, they had had sixty-six cases in males and 144 in females, a total of 210 cases, with 121 deaths. The mortality, according to different observers in the South, varied anywhere from 40 to 70 per cent.

As to treatment, Dr. Babcock said that most of the remedies that had been recommended by various authorities had been tried. Extensive experiments were carried on with atoxyl, and some of the earlier cases were apparently benefited thereby. In the case of an old woman who was given very large doses of atoxyl, as recommended by one of the English authorities, atrophy of both optic nerves occurred, possibly as a result of the treatment. Much was to be done, the speaker thought, in the way of diet. Dr. Long was investigating this aspect of the subject; he had found various parasites in the stools of these patients, to the presence of which he was inclined to attribute more or less ætiological significance. Personally, Dr. Babcock said, he believed that these intestinal parasites were of accidental occurrence, and bore no causative relation to the disease, but at the same time, this irritative factor should certainly be eliminated in the treatment of these patients, and the stools should be investigated before any line of treatment was begun. Quinine injections and irrigations had been given by Dr. Long for the removal of the amœbæ. The disease was an exhaustive one, and the treatment should be directed along those lines. In the public institutions, they were learning to treat the disease very much as they did neurasthenia.

DR. SHERWELL said the case referred to by Dr. Hyde was published in *THE JOURNAL* for February, 1883. He himself thought the history then given was a typical one of a typical case in the person of an Italian sailor, a Genoese, living as is customary when not at sea, in a hamlet near that city. The symptoms, both subjective and objective, presented a classical picture which he thought was well given in the text, and would enable another to make an almost certain diagnosis in cases of the sort. Two years later a similar case presented itself at his clinic, almost or quite identical, in a sailor also, having the same lethal termination. His opinion expressed then as to ætiology, he did not think he had any reason to change, as he believed it due to fungus intoxication.

It might be particularly noted that these men, as is common with the Italian mariners, had one common mess, but cooked their own polenta, etc., from the grains which they brought from their country homes, so that in reality they were on the same diet as in their native villages. Dr. Sherwell thought that the fungus or parasite to which pellagra had been attributed might occur in all cereals analogous to corn, such as rye, etc.

DR. STELWAGON stated that apropos of what Dr. Hyde said, several European observers, who had studied this disease, had also made the observation that pellagra had occurred in persons who had never eaten corn. Among this number was Kaposi, and, he believed, Besnier also.



DR. HARTZELL briefly alluded to a case which he hoped to report more in detail later. In Philadelphia he recently had under his observation a girl of nine years, presenting typical symptoms of pellagra, who had never been outside the State of Pennsylvania. Her illness began about a year ago with marked hebetude; she would remain a long time in one position, and it was almost impossible to direct her attention to anything. Subsequent to this she developed marked gastro-intestinal symptoms, particularly an uncontrollable diarrhoea. Three months ago she developed a marked, brownish-red eruption on the face and on the backs of the hands which ended abruptly at the sleeve, and which was followed by abundant desquamation. The skin generally was slightly pigmented and rough.

Apparently, then, we had a typical case of pellagra occurring in a subject who had never been outside of the State of Pennsylvania, and who, so far as could be ascertained, had never eaten Indian corn, her aunt being quite positive about this.

DR. DUHRING said he had had but little experience with pellagra excepting many years ago in Italy, where he spent some time in Milan and saw many cases. He was impressed at the time with the fact that the erythematous or inflammatory skin manifestations of the disease did not show anything very distinctive. There was considerable infiltration of the skin, but not like that in psoriasis or chronic eczema. In regard to the case referred to by Dr. Hartzell, he had seen that patient on several occasions, and the disease of the skin had impressed him as being distinctly peculiar, and different from that in the cases he had observed elsewhere. There was a symmetrical, low grade inflammation, mingled with distinct brownish pigmentation, and a consequent color which he would describe as an ashy-brownish-coffee-and-milk red. He could not recall having ever seen that color in the European cases, certainly not so pigmented, which was the more noteworthy as the Philadelphia case was a child.

Dr. Duhring said the fact that the eruption occurred so frequently upon the hands and face did not in itself prove to him conclusively that it was due solely or even in great part to the sun's action. He had always been in doubt as to the sun being such a potent factor in this disease. The case Dr. Hartzell reported had not been much if at all exposed to the sun, and the speaker said he would go so far as to say that he believed the sun's influence in this disease had been largely overstated. He believed that the causative factor of pellagra was distinctly internal, and probably of a toxic nature, but he did not care to enter further into the ætiology, as he had nothing new on this subject to contribute.

DR. PUSEY, speaking of the exclusion of corn from the diet, said that when it came to the statement that a patient in this country had never eaten Indian corn, the reliability of such a statement could be seriously questioned. He considered it doubtful that there was any American living at the age of twenty-five who had not eaten Indian corn. The statement was analogous to the contention of Jonathan Hutchinson in regard to the relation between leprosy and eating fish; Hutchinson was always prepared to prove that any one had eaten fish.

Dr. Pusey said that while we had made an important advance in recognizing the presence of pellagra in this country, he was inclined to believe that the diagnosis was now being overworked. Pellagra was not a condition in which we could make as satisfactory a diagnosis as we could in tuberculosis or syphilis. The diagnosis rested on a triad of symptoms—psychical, gastro-intestinal, and cutaneous. It was essentially a picture of autointoxication, such as we met with in gastro-intestinal disturbances, and he believed that many of the cases of so-called pellagra might well be questioned as to the accuracy of the diagnosis.



FIG. 1.  
Dermatitis simulating pellagra.



FIG. 3.  
Pellagra.  
Showing lesions on face, just before death.



FIG. 2.  
Dermatitis simulating pellagra.  
Showing enlarged papillæ on forearms, quite unlike the skin of pellagra, which is scaly and pigmented.



FIG. 4.  
Pellagra.  
Showing typical lesions on backs of hands and wrists.



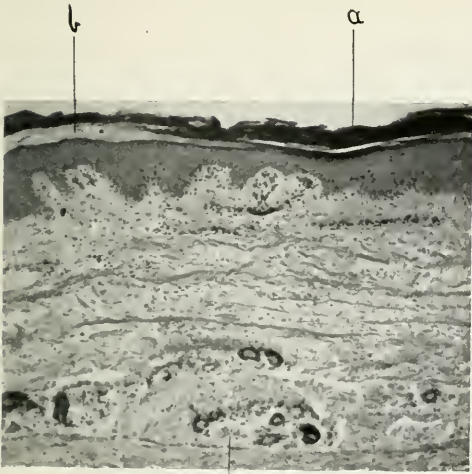


FIG. 5. Pellagra.

Atrophy of epidermis and of corium. *a* thickened, condensed, hyalin stratum corneum. *b*, stratum corneum, only the superficial layer of which is condensed, the deeper portion being oedematous. *c*, a nerve.

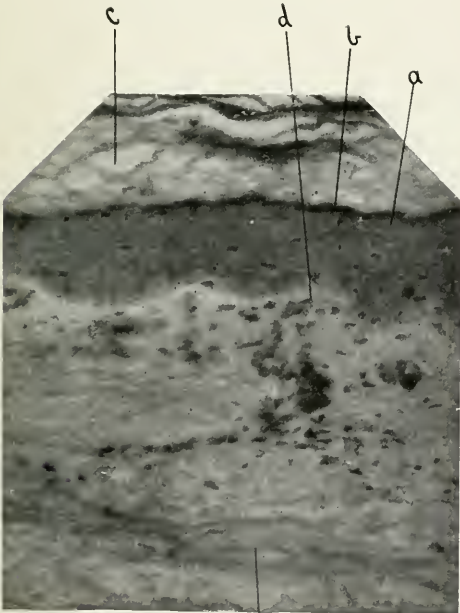


FIG. 6. Pellagra.

Almost complete atrophy of the papillae. *a*, transition zone of stratum spinosum, without the formation of a stratum granulosum. *b*, a condensed lamella rich in diffused chromatin. *c*, oedematous stratum corneum. *e*, hyalin collagen fibres.

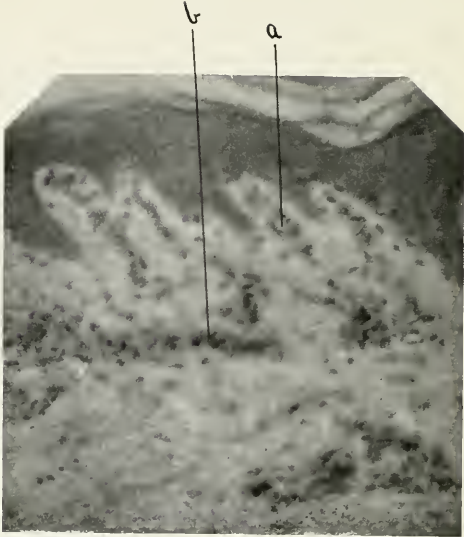


FIG. 7. Pellagra.

An area in which the papillary atrophy is not so marked as in that shown in Fig. 5. *a*, papillary capillary. *b*, superficial vessel of corium. Both vessels show endothelial proliferation.

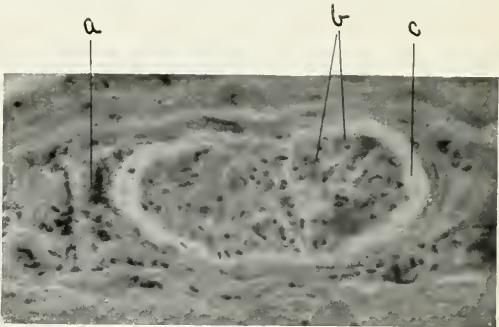


FIG. 8. Pellagra.

Nerve of corium (the same shown at *c* in Fig. 4). *a*, thickened perineurium. *b*, amyloid bodies. *c*, space between nerve and perineurium.

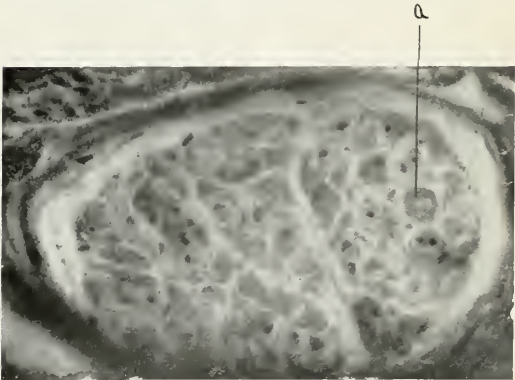


FIG. 9. Pellagra.

The same nerve shown in Fig. 7. Eosin and anilin blue stain for axis cylinders. Most of the axis cylinders have disappeared. *a*, swollen nerve fibre.







FIG. 1.  
Prurigo.

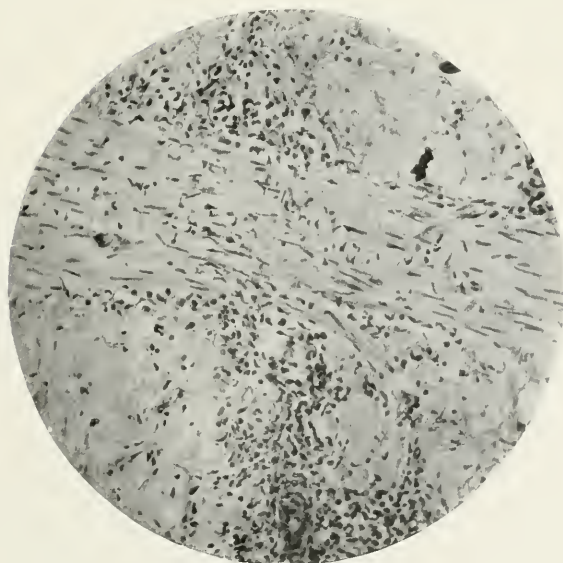


FIG. 2.  
Prurigo.



He did not include in this category those well-defined cases which had been recognized by experts, but those in which an off-hand diagnosis had been made, based upon the presence of one symptom or another.

With all due respect to many writers on the subject, the speaker said he was inclined to believe that the disease was not of such recent date in this country. Probably many of these cases had been overlooked or unrecognized in the past, especially among immigrants. The speaker recalled a characteristic case recently seen in a Chicago institution, in a patient who had only been in this country six months, and who had certainly had pellagra for a very much longer time.

## A FATAL CASE OF BULLOUS DERMATITIS.\*

By S. POLLITZER, M.D., New York.

THE bullous diseases of the skin constitute a large group made up of many constituents, whose ætiology and mutual relations are unknown. The work of sorting out the different elements of this group is still to be done, and the task will be facilitated by careful records of individual cases. It is this consideration that leads me to report the following case.

The patient was a merchant fifty-six years of age, born in the United States, residing in Florida, married, and the father of four healthy children. His father and mother both died in old age; three brothers are alive and well; two died of Bright's disease. There was no family history of rheumatism, gout, tuberculosis, cancer, syphilis, or heart trouble. His personal habits were good; he was very moderate in the use of alcohol, tobacco, and coffee. He denied syphilitic infection, but admitted one attack of gonorrhœa thirty years ago. As a child he had measles; in 1876 an attack of appendicitis from which he recovered without operation; in 1887 pneumonia.

He was on a pleasure trip with his family in Canada when the present illness began about September 7, 1909, with pruritus in the lumbar region, which was worse at night. A few days later the outer side of the right arm became pruritic, and he noticed that both of these regions were red. In the course of the next three days the redness and itching extended over the entire body, and he came to New York for medical advice.

I saw him first on September 15th. At the first inspection the skin of his entire body with the exception of the neck, head, and hands was found to be red, somewhat œdematous and intensely pruri-

\*Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

tic. A slight degree of fine scaling was noted over the entire surface. The picture was one of an acute dermatitis of moderate degree. He was given a lotion of calamine and zinc with two per cent. of phenol. Two days later both arms, especially the right, were greatly swollen, almost twice the normal size, and there was a group of small vesicles on the upper arm and several large blebs on the forearm near the right wrist. Three days later the œdema of the arms had subsided, but his neck and chin were greatly swollen, several new blebs had appeared on the arms, and a group of small vesicles on the left thigh. Two days later I found him unable to walk on account of the swelling of his ankles, which were covered with large bullæ, a group of similar lesions had developed in the lumbar regions and on the forearms, and there were scattered large and small blebs on the trunk, face, and legs.

The bullæ on the right wrist and in the lumbar region were of giant size, measuring more than an inch and a half in diameter, and some of them attaining an elevation of fully three-quarters of an inch. They were filled with clear serum and were unilocular, collapsing when pricked with a pin. He suffered considerable pain and great discomfort from the blisters on the back and the ankles; his temperature was  $101.5^{\circ}$ . His urine was scanty in quantity, sp. gr. 1028, acid, contained no albumin nor sugar, gave a fairly strong indican reaction, and showed a very few hyaline casts.

He entered the German Hospital the next morning (September 23rd), when the following status was taken: "Strong healthy-looking man. Skin of entire body is red, swollen, indurated to the touch and for the most part covered with small, thin, white scales. The extremities, face, and scalp show many blisters, some minute, some as large as a silver dollar, for the most part discrete: in a few places, the wrist, buttocks, and ankles, several have run together to make one large bleb. They contain a yellowish, slightly turbid serum. The inguinal, axillary, and epitrochlear glands are enlarged, discrete, and not tender. The pupils are equal and react normally to light and accommodation; the lids are cedematous. The mucosa of the mouth is deep-red in color; the tongue is coated and moist; no blisters in the mouth; tonsils and pharynx normal.

"The chest is well formed; expansion good. The heart and lungs are normal. The abdomen is slightly distended; no tenderness or rigidity. Liver dullness from sixth rib to free border; edge not palpable. No other organs or abnormal masses palpable.

Right inguinal hernia. Varicocele on both sides; genitalia otherwise normal." His temperature on admission was  $101.2^{\circ}$ , respiration 24, pulse 88. A blood examination showed: White blood cells, 9,500; polymorphonuclears, 45%; eosinophiles,  $33\frac{1}{2}\%$ ; large lymphocytes,  $4\frac{1}{2}\%$ ; small lymphocytes, 17%; no plasmodia, no foreign elements. The extreme eosinophilia is noteworthy. Two days later the eosinophiles had dropped to  $20\frac{1}{2}\%$ . The day after admission the temperature was  $99^{\circ}$  in the morning and  $101.6^{\circ}$  in the evening; thereafter it rose irregularly, going as high as  $103.6^{\circ}$  on the sixth hospital day. During the night of that day the temperature dropped sharply to  $99.8^{\circ}$  the following morning, and with the crisis in temperature there seemed to be a crisis in the blood, the eosinophiles dropping to 4%, and thereafter, throughout the remainder of his illness, the numerous blood counts showed but slight fluctuations, the eosinophiles ranging from 2 to  $6\frac{1}{2}\%$ .

During this first period the patient's general condition appeared to grow worse as the daily temperature rose. He became "flighty" and delirious, complained of feeling sore all over; the œdema of the face decreased, giving his cheeks a sunken appearance. The pulse was rapid, though of good quality. The urine was scant—from 570 to 940 cc. per diem—and contained many hyaline and a few granular casts. At the same time the local conditions did not change much; for a couple of days after admission there were many new blebs, most of them small, on various parts of the surface, then for a few days there were few or none, the older blisters tending to dry up. The rupture of the large blebs on the buttocks left an excoriated surface which gave considerable pain.

With the fall in temperature on the sixth day his general condition grew markedly worse. On the seventh day his temperature remained around  $100^{\circ}$ , but he now presented the appearance of a man in a profoundly typhoidal state; apathy and a low muttering delirium, with occasional hallucinations of persecution, attempts to get out of bed, etc. The tongue was dry and thickly coated. I may say here that the Widal reaction was negative, nor were there any physical signs of typhoid. On the eighth day the temperature again rose rapidly to  $103.8^{\circ}$ . Thereafter the temperature ran an irregular, apparently septic course throughout the rest of the illness, remaining high for several days, then falling to normal, and again rapidly rising to  $103^{\circ}$ , till during the last days of illness it rose to  $105^{\circ}$  and subfinem,  $105.8^{\circ}$ . Throughout this entire period the patient remained in



a typhoidal condition. There were, of course, short periods during which he was rational and in conversation talked clearly for a few minutes, but he soon would lose the thread of ideas and wander in delirium. On the eighth and on the fourteenth day he had a chill lasting about five minutes. His abdomen was for a time greatly distended and tympanitic and he passed gases and faeces involuntarily, an effect probably due to the paralytic action of the toxins on the bowels. A moderate diarrhoea was present for several days, but was readily controlled by astringents. On the eighteenth day he passed a little bloody mucus, leading to the suspicion of blebs on the mucosa of the colon. A microscopic examination of the faeces revealed nothing of interest, a little blood, no parasites. Repeated and thorough physical examinations failed to disclose any internal abnormality. On the nineteenth day, for the first time, the urine contained a few red blood cells, and there was present a considerable number of hyaline and granular casts. The daily quantity of urine, which was at first low, was brought by the vigorous exhibition of water per os and by hypodermoclysis up to 1200 to 2200 cc. per diem; its sp. gr. ranged from 1017 to 1024.

I have spoken of the blood examination. Blood counts after the first week showed regularly, 17,000 to 19,000 leucocytes. Several blood cultures were made during the course of the illness with uniformly negative result. Serum from the blebs injected intraperitoneally and subcutaneously into guinea pigs did not appear to affect the animals in any way. Smears made from the blister fluid showed no organisms microscopically and cultures of the fluid were negative. In the illuminated dark field no bacteria or other organisms could be detected. A differential count of the cellular elements in the fluid gave: Eosinophiles, 74%; lymphocytes, 22.5%; polymorphonuclears, 3%; large mononuclears, 5%. The development of blebs throughout the disease fluctuated moderately. At times for two or three days no blisters appeared; again, for several days in succession, there was a constant eruption of small blebs in moderate number, or occasionally the sudden appearance of a large crop of several hundred. The occurrence of the crops of blisters seemed to stand in no relation either to the changes in temperature nor to the fluctuations in his mental state. The lesions at no time attained the large dimensions of the first outbreak. They were located for the greater part on the head and the extremities and showed no tendency to any special grouping. A few days before the end, several small blisters

on the feet had a hæmorrhagic character. The new vesicles rarely appeared on the site of former lesions. As they healed they left light pinkish areas of smooth skin that were in some cases slightly raised above the surrounding level. During the last ten days a dusky pigmentation of the entire skin developed and the pigment showed a tendency to accumulate at the margins of the pink or white areas left by the healed blebs, giving an appearance like vitiligo.

On the buttocks and over the sacrum the excoriated surfaces did not heal, but on the contrary developed into large superficial ulcers. Throughout the disease the mucosa of the mouth was intensely congested, leaving a deep-red color, but at no time were any blisters there. On the other hand it was difficult to keep his mouth free from the thick stringy mucus that was constantly formed. There were no indications of bleb formation in the upper respiratory tract, but the patient's hoarse voice gave evidence of a probable congestion of the larynx.

At the end of the third week in the hospital, the patient's skin was in a comparatively good condition; the œdema had subsided ten days before; few or no blisters had appeared for several days; the old ones had healed or were healing well; the temperature maximum was  $102.4^{\circ}$ , pulse 108 to 120, but of good quality, as it had been throughout the disease. But with this superficial improvement the mental state seemed worse than ever; he was delirious all the time and when roused did not recognize his surroundings. On the twenty-second day the temperature ran up to  $105^{\circ}$ , dropped to  $100^{\circ}$  the next morning, shot up again to  $105.2^{\circ}$  and for the next two days made wide excursions, reaching nearly  $106^{\circ}$  shortly before death in the morning of the twenty-sixth day in the hospital, thirty-one days after the appearance of the first bullæ and about forty days from the beginning of his illness.

A post-mortem examination was made four hours after death by the pathologist to the hospital, Prof. W. G. McCallum of the College of Physicians and Surgeons. Particular pains were taken to make the examination a thorough one. Practically every organ and tissue in the body was examined macroscopically and microscopically, including among other tissues the central nervous system, the bone marrow, the adrenals, the abdominal sympathetic, the lymph nodes, etc. Cultures, anaërobic and ordinary, were made from the heart blood, the spleen, and the kidneys; they all proved negative. There was found a fresh lobar pneumonia, developed probably in the

last days of the illness (he was examined very carefully four days before death by Dr. I. Adler, with negative result as to the lungs), a chronic diffuse nephritis, an acute splenic tumor, and a small ulcerated patch on the colon. Two superficial abscesses on the anterior chest wall were the result of infection with the needle used in hypodermoclysis. Microscopic examination of the blisters showed nothing special in their structure. They resembled pemphigus blebs formed in the lower middle portion of the rete.

So far as throwing any light on the disease is concerned, the post-mortem examination may be said to have been negative.

The treatment of the case had been mainly symptomatic: fluid diet; stimulation with strychnine and digitalis, etc.; regulation of the bowels; in short the treatment was that of a severe case of typhoid. For the better elimination of the toxins, large amounts of saline solution up to 1500 cc. were injected daily, under the skin. At the suggestion of Dr. H. G. Klotz, who saw the case with me early in its course, he was given atropine hypodermatically for about two weeks with no noticeable effect. Beginning on the thirteenth day he was given sodium arsenate by hypodermatic injection. It may be said here that the arsenic could hardly be looked upon as the cause of the general pigmentation of the skin which was noticed about a week after that drug was first given.

To sum up the features of this case, we have a middle-aged man of good habits, in good health except for a chronic diffuse nephritis which apparently gave no trouble, attacked with a dermatitis that had the character of a fine-scaling pruritic erythrodermia and that rapidly spread over the entire integument. Its development was in some places preceded or accompanied by a severe œdema, which subsequently subsided, but a moderate œdema of the entire surface persisted for two weeks. Ten days after the appearance of the scaling, red areas, crops of large bullæ appeared in various parts of the body, mainly on the extremities and the buttocks. The development of fresh blisters in general smaller than at first, continued in greater or less number irregularly throughout the course of the illness, and the skin became diffusely pigmented. Temperatures following a septic curve up to about  $104^{\circ}$  developed, the patient became delirious and fell into a typhoidal state which terminated after a fortnight in coma and death, the whole course of the illness lasting about forty days. The blood showed at first an extraordinary eosinophilia, which later assumed moderate proportions. Blood cultures, cultures from the

blister serum and inoculations of the latter were negative, as was also the examination in the illuminated dark field. The post-mortem examination threw no light on the case. As to the diagnosis of this remarkable case it may be said that we are certainly not dealing with a pemphigus; modern usage limits that term to a disease which is primarily bullous. The acute form of pemphigus, which alone could come under consideration in this connection, may be excluded by the absence of any infected wound and, above all, by the preliminary diffuse scaling.

Dr. George Henry Fox, who saw the patient with me at the end of his first week in the hospital, noticed one lesion on the back of the hand which had an annular appearance, resembling an erythema multiforme, and suggested the possibility that the disease was one of the Osler type of erythema multiforme with visceral complications. In the first place the lesion in question was absolutely the only annular lesion that appeared among the thousands of blisters that developed during the course of the illness; in the second place this condition does not begin as a generalized scaling dermatitis; third, the visceral complications are usually very prominent—in our case there were no visceral complications; fourth, the early appearance of erythrocytes in the urine common in the Osler type was absent here; and finally the insidious development and the entire course of the disease are against that diagnosis.

Perhaps the most remarkable feature of our case was the profound toxæmia that developed comparatively early in the case, persisted throughout, and in the end was the cause of death. As to the origin of this toxæmia I am unable to say anything. All the resources of a modern hospital have left us in the lurch. I confess myself ignorant of the ætiology of this case as of the ætiology of measles, scarlet fever, and many other infections.

#### DISCUSSION.

Dr. FORDYCE said that in his paper he quoted a case that had been under his observation at the City Hospital in which the symptoms were almost identical with those in this case, excepting that there was no history of any antecedent eruption. The patient developed lesions that resembled erythema iris on the backs of the hands, and soon large bullæ appeared on the body and mucous membranes, including the conjunctivæ. The temperature rose to 105°, and coma, delirium, and finally death occurred. The ætiological factor in these cases, Dr. Fordyce said, was still unknown. It was perhaps some obscure proteid or a chemical product.

Dr. ENGMAN said that during the past year they had been making blood



counts in almost all skin eruptions, and they had noticed that in septic pemphigus there was always a high leucocyte count and no eosinophilia. In dermatitis herpetiformis, in Osler's type of erythema multiforme, and in pemphigus vulgaris there was generally a high eosinophilia, but this was not so in the septic type of pemphigus.

DR. DUHRING said he would only refer to the diagnosis from the clinical standpoint. It seemed to him that whatever the cutaneous lesions might be at the outset, the condition often or generally developed into what might properly be termed pemphigus, and he could see no objection to classifying it as a case of pemphigus malignus. He would distinguish such cases from pemphigus vulgaris, and it possessed no features in common with dermatitis herpetiformis. He might incidentally remark that many cases reported during the past twenty-five years by various observers under the name of dermatitis herpetiformis were not examples of that disease at all. In pemphigus malignus the constitutional symptoms, especially depression of the nervous system, were usually distinctive from the onset of the disease, and the mucous membranes, as was well known, were at times markedly affected. He recalled one case, an elderly woman, where death occurred within a short time after the beginning; in that instance there were only a few, and in no manner striking, lesions on the skin, but the mouth was considerably involved with poorly developed blebs, causing a raw, spongy, bleeding, mucous membrane.

DR. HYDE said the case reported by Dr. Pollitzer was a commentary upon our occasional impotence and lack of knowledge. Here we had an interesting and fatal case reported under a title which referred to a condition of the skin merely, and yet the symptoms showed that we were obviously confronted with some toxic process which profoundly influenced the entire economy and of which the skin lesions were simply the superficial evidence of the deeper trouble. Dr. Hyde said he had seen a few cases similar to this one, all resulting fatally in which nothing of significance was discovered post-mortem. In two of his cases, one a man, the other a woman, he recalled that the patients had undergone a severe strain prior to the onset of the illness, and in both cases the nervous centres had been profoundly influenced.

DR. POLLITZER said that his patient was a merchant from the South who had previously been in good health for many years; he was a married man, with a wife and three children, and so far as could be ascertained, he had sustained no business reverses nor other shock. In pemphigus malignus or acutus, to which Dr. Duhring had referred, there was usually a history of preceding injury, followed either immediately or in the course of a few days, by an acute septic condition with the formation of bullous lesions on the skin. There was no history or evidence of such a condition in this case. The disease began as a fine, scaling, diffuse, universal dermatitis, followed by the development of bullæ, with high temperature, delirium, coma, and death.



SOME PROBLEMS IN METABOLISM OCCURRING IN  
PATIENTS WITH CERTAIN DISEASES OF  
THE SKIN.\*

By L. DUNCAN BULKLEY, A.M., M.D., New York.

Physician to the New York Skin and Cancer Hospital;

Consulting Physician to the New York Hospital, etc.

**D**ERMATOLOGY has been studied too long and too much as a separate entity, with great attention to peculiar and rare manifestations on the skin, to histological details, and even latterly to microbic influence, without sufficient regard for the basic conditions of pathogeny, which the skin must share with other portions of the body.

Metabolism, with the various disorders of different organs connected with or causing its derangement, is beginning to loom large on the medical horizon, in connection with many diseases, such as diabetes, rheumatism, gout, biliary and renal calculi, etc., and dermatology should not be behind other branches of medicine in recognizing the importance of the subject, and acting practically on the lessons inculcated. And yet in the text-books and in much of the current literature of this branch there is relatively little to show that this aspect of diseases of the skin is a subject of much serious thought or practical application.

At the Fifth International Congress in Berlin, in 1904,<sup>1</sup> I was asked to open the discussion on "Diseases of the Skin Connected with Errors in Metabolism," and several others presented papers of the same character; Jadassohn especially, gave an exhaustive study of the subject, with an analysis of a large amount of literature. His conclusions are worth presenting:

1. "The recognized anomalies of metabolism have an undoubted causal connection with certain diseases of the skin; with others they play at least an essential part.

2. "There are dermatoses of unknown origin which cling so firmly to the individual that they make as it were a part of him;

\* Read before the 34th Annual Meeting of the American Dermatological Association, Washington, D. C., May 3-5, 1910.

<sup>1</sup>Tr. V. *Internat. Dermat. Cong.*, Berlin, 1904, pp. 121-155.

such are psoriasis, rare cases of urticaria, and many cases of prurigo of Hebra, and the prurigo diathésique of Besnier.

3. "Different individuals respond very differently to well-recognized exogenous causes of dermatoses—from a resistance to a great susceptibility.

4. "The same individual may react to various causes in relatively the same manner, and different individuals may react to the same cause in a relatively very different manner.

5. Heredity plays an undoubted rôle in certain dermatoses; psoriasis, prurigo, many eczemas, and urticaria."

Faulty metabolism lies at the bottom of a very large share of diseases of all kinds, and even such an infection as tuberculosis is recognized as taking place more readily, if at all, when the system is in a lowered state of vitality, owing to deranged metabolism. It is most reasonable to suppose that the elements of the skin participate with other tissues in the tendency to diseases under similar conditions.

At the outset it must be stated that full recognition is given to the manifold and various external causes of lesions on the skin, and the very important part which microörganisms have in their production and continuance. But the claim is made, and can be substantiated, that these alone are not sufficient to account for the occurrence of skin lesions in some persons and the resistance of others to the same causative agencies, also for the obstinacy of these troubles in some and the ready yielding in other cases. Conversely, the results obtained in very many instances from proper treatment directed against metabolic errors, demonstrate conclusively that these play an essential part in the causation of many disorders on the skin.

It is not a little interesting to note that the recent attention to and study of metabolism, including anabolism and catabolism, is but a return, with more scientific accuracy to what has long been recognized under the name of "nutrition," with "assimilation" and "disassimilation," by great clinical teachers of the past. While ignorant of the exact manner in which the results were produced, they were convinced from clinical observation that systemic changes, now included under the general name of faulty metabolism, had very much to do with the alterations of tissue to which the names of various diseases are given.

It is also interesting to note that while only ridicule was often given to those who a few years ago referred to an altered blood state as connected with diseases of any kind, the more recent study of hæmatology has demonstrated conclusively that the elements of the blood are subject at times to great changes, which of course represent metabolic derangements, and which are more and more recognized as resulting from and indicative of disorders or diseases of various organs. Thus far it is mainly the cellular elements of the blood that have been studied, but researches are also being made in regard to the plasma, and in time these will no doubt further clear up some of the problems of metabolism. As yet very few definite conclusions have been reached in connection with diseases of the skin, the single one of eosinophilia in dermatitis herpetiformis standing out prominently, as indicating what may be expected from the study of the blood.

But the urine, coming as it does directly from the arterial blood, when repeatedly and fully analyzed volumetrically, furnishes a most accurate index of the state of the blood, and a very good exponent of the manner in which metabolism is carried out; and it is to some of these indications derived from the urine that I would direct attention at this time.

Few realize what a perfect indicator the urine is of the manner in which the metabolism of the body is performed. After the blood has been prepared by the various organs and tissues of the body, and after it has been aërated and purified by the lungs, and is on its way through the aorta to nourish the tissues, a small artery takes, as it were, a sample of this arterial blood to each kidney for the final judgment as to its quality, and for the removal, as far as possible, of injurious substances; this purified blood being returned to the vena cava, and thence again to the lungs. It is to be remembered that only a very small portion of the blood flows at one time through the kidneys, while the bulk of it passes on to nourish the brain and the rest of the body, waiting for its later purification by the kidneys. These organs might, therefore, be spoken of as the final judges of what perfect blood should be, as their function is to eliminate substances injurious to the body.

The urine is, therefore, a most perfect exponent of the condition of the metabolism of the system, and too much stress cannot be laid upon the importance of its repeated and careful volumetric

analysis in cases of chronic disease of the skin and other organs; for by it we may learn, daily if wished, much which can not be otherwise ascertained in regard to the manner in which the nutritive processes of the body are carried out.

It is understood, of course, that this does not refer solely or mainly to the finding of albumin and casts, or glucose, in the urine, important as this often may be; for it is a little surprising how seldom these occurred in the analyses which have been made, although diligently sought for. But it refers to a systematic understanding of the composition of the urine along many lines.

For many reasons it is desirable to analyze specimens of the complete daily secretion of urine, for samples taken at haphazard may be so influenced by many circumstances and by food and drink taken, as to be of relatively little value in representing the performance of metabolism. But as it is difficult for persons in active life, as are many with skin affections, to collect the entire urinary secretion of the day, it answers fairly well to take samples passed at the same fixed hours of the day on different occasions: for this reason most of the analyses to be referred to relate to urine passed at ten o'clock at night and seven o'clock in the morning, the two specimens being always secured, although in very many instances a sample of the urine of the entire day was analyzed. In this way many patients in private practice have been studied, at intervals of a week or so over long periods, and the very greatest changes observed from time to time, in response to diet and medication.

Ten years ago<sup>1</sup> I presented the subject of the urinary alterations found in patients with various diseases of the skin, based on studies of 2,000 analyses. Since that time about 2,000 more careful analyses have been made in my laboratory, and a complete study of the tabulated data of these has developed features which are of interest; for they exhibit evidence of deranged metabolism which cannot but be of importance in connection with the cutaneous lesions present in the patients, which so often changed in character or degree with the alterations in the urine.

No attempt will be made at present to analyze fully the very large amount of data collected, although some important deduc-

<sup>1</sup>BULKLEY. Imperfect or Deficient Urinary Excretion, as Observed in Connection with Certain Diseases of the Skin. *Tr. Am. Dermat. Assn. for 1899. Jour. Cutan. Dis.*, Nov., 1899, p. 503, March, 1900, p. 99.

tions will be made from them. As in the case of the studies which have been made upon the blood of patients with diseases of the skin, very little of definite signification has been determined on, so in regard to the urine, we are not yet in a position to affirm positively that this or that disturbed condition of any of its ingredients is necessarily connected with any particular lesion on the skin.

This is not to be wondered at when it is remembered that, although xanthoma diabeticorum is pretty definitely connected with the presence of sugar in the urine, the eruption is rare indeed among those affected with diabetes; and yet no one questions but that the indication derived from the urine in regard to glucose is a valuable aid in the management of the disease. The same is more or less true in regard to the presence of indican in the urine in urticaria, although but few of those exhibiting even a great excess of indican will be troubled with this eruption. It is most reasonable to believe that with accumulated experience and careful observation, rightly interpreted, there will be established more or less definite associations between other alterations in the urine and recognized skin lesions, even as uratic deposits are associated with acute and chronic gout, and the variation of the chlorides in the stages of pneumonia, etc. Certain it is that even with our present knowledge of urinalysis, it constantly affords to the careful observer most valuable information in regard to systemic conditions in many patients with diseases of the skin, and often renders efficient aid in directing dietary and medicinal measures.

The problems to be studied in connection with metabolism, as observed in certain diseases of the skin, relate to a number of different conditions as revealed by the urine. The analyses have included the specific gravity, the volumetric determination of the acidity, the urea, the phosphates, chlorides, sulphates, and indican, with, of course, tests for albumin and sugar, and microscopic search, after centrifuging, for casts, crystals, etc.

The variations observed in the composition of the urine in various patients, and in the same patient at different times, are often most striking, and represent metabolic disturbances of the greatest significance in connection with certain diseases of the skin. Time would fail to allow an attempt to interpret any portion of the figures which have been tabulated; indeed, as was remarked in my former papers, I do not think that we are even yet in a position to



assert positively the urinary or metabolic changes definitely belonging to different diseased states of the skin.

We must, however, take a broad view of the pathogenesis of dermatological lesions, and recognize that certain systemic states act as the predisposing cause, and often even as the exciting cause, as for example in urticaria, while local agencies, including micro-organisms, play a most important part in the determination of just the form which the dermatosis will take. An example of this latter is seen in lupus: all recognize that the tubercle bacillus is an important factor in its production, but even with the almost omnipresence of the bacillus this eruption is relatively rare, and there must be something in the soil as affected by metabolism, to allow of its operation. The problem is as to the altered blood composition which favors the growth of the parasite and the development of its toxin.

The *specific gravity* of the urine is often said to vary so much with the quantity of liquid taken, that no proper judgment can be formed from it. This is not wholly true, as is evidenced in the urine from advanced cases of glycosuria and albuminuria.

Moreover, from the specific gravity and the total daily excretion of urine we may determine accurately the total output of urinary solids, which certainly is of the gravest importance to the economy. In my former paper I gave a table whereby it could be ascertained how this total compared with the amount normally excreted in health, in patients of different weights. Finally, as the urine comes directly from the arterial blood, a high specific gravity must often indicate the same in the blood, and surely a thicker condition of the blood cannot be without its influence on the state of the skin and other tissues. In the examinations made the specific gravity varied from 1.046 to 1.002, and the combined figures from a very considerable proportion of the cases showed a specific gravity of 1.030 and over, while there were relatively few exhibiting 1.010 or under.

The *acidity* of the urine, as measured volumetrically, is also known to vary greatly with the amount of liquid consumed, but the same arguments apply to it as to the specific gravity. Its acidity must, in a measure, represent that of the blood, and the efforts of the kidneys to remove the same.

With a normal acidity represented between .25 and .3, it has

been a constant occurrence to observe urines with an acidity of .6, .8, and even up to 1.2 on rare occasions; this latter was in a patient with very severe psoriasis. Now it cannot be questioned that serious metabolic problems are concerned when the arterial blood will yield such a greatly increased amount of acid to the urine, and it is equally certain that such blood circulating in the skin cannot be without its pathogenetic effect on the latter. Equally true is it when the acidity of the freshly passed urine has become lowered far below the normal, as I have constantly seen it, even to .063. The indications for treatment of certain skin lesions which may be derived only from the specific gravity and the acidity of the urine are, therefore, often of the very highest importance, and clinically are found to be of the greatest value as indicators of perverted metabolism.

The volumetric determination of the output of *urea*, representing the end-product of proteid digestion, is often of very great importance in certain dermatoses; this is illustrated strongly in the two cases of dermatitis herpetiformis reported by Hardouin<sup>1</sup>. Making a daily analysis of the urine of twenty-four hours over a period of nearly six months, he found that in one case on eight occasions, at pretty regular intervals, there was a fresh eruption after a period of diminished excretion of *urea*. In the second case the onset of the attack repeatedly coincided with the lowest point of *urea* excretion. This relationship has been confirmed by other observers. In my analyses the percentage of *urea* has varied very greatly, and while it has been below the normal 2 per cent. in a very considerable proportion of the instances, and sometimes down to even .04, it is not at all uncommon to find the normal proportion more than double, generally with a very high specific gravity and acidity. These great variations in the excretion of *urea* certainly cannot but be important, significant, as they are, of the actual condition of the arterial blood, and of the manner in which metabolism of the nitrogenous elements has been carried out. It is understood, of course, that these examinations were of the urine of reasonably healthy kidneys, and not from those exhibiting albuminuria.

The problems of the relation of the amount of *phosphates* excreted to certain diseases of the skin is an interesting one, considering the nervous element which in one way or another is asso-

<sup>1</sup>HARDOUIN. *Ann. de dermat. et de syph.*, 1900, p. 1137.

ciated with so many dermatoses. The volumetric quantity of the phosphates in the urine was found to vary greatly in many conditions, ranging from 25 per cent. to .25 per cent., the normal being about 8 per cent. The large majority of cases showed a diminished excretion of phosphates, there being a large number of analyses with two or three per cent. or less, indicating failure to properly metabolize the nucleins of the food and of the body tissues; while in rare instances a great excess of phosphates indicated undue expenditure of nerve tissue.

The *chlorides* are not a very important element of the urine, as far as relates to their altered quantity, except as indicating the activity of metabolism, and incidentally the amount of food taken; in my analyses they varied from 42 per cent. to .2 per cent., the normal being 16-18 per cent. The chlorides are known to vary greatly in amount in the urine in different diseases, and to be diminished in chronic diseases, the proper equilibrium of chloride of sodium in the blood being maintained, as far as possible by the kidneys.

The *sulphates* are of very considerable significance, and have more or less definite relations to certain diseases of the skin. In my analyses they were found to vary from 6 to .2 per cent., the normal being 1 per cent. As the sulphates are formed from the decomposition of proteid substances, whether from the food or tissues, they represent with urea the condition of the nitrogenous metabolism in the system. Increase in them is recognized as representing the result of intestinal putrefaction, and when this occurs it is common to find a considerable portion of it as an ethereal sulphate, in the form of indican, in the urine, often in very considerable quantity.

*Indican* in great excess in the urine is always of significance, and any appreciable amount should always call attention to intestinal fermentation, which is known to play an important part in connection with certain diseases of the skin, such as exudative erythema, urticaria, angioneurotic œdema, etc. In my analyses it was also found in quantity in many cases of acne, eczema, etc.

The problem of the exact connection between this increase in the sulphates and indican and lesions on the skin is a most interesting one, and as yet unsolved, but clinical experience showing the improvement in the latter as the former is corrected is quite conclusive and should stimulate further inquiry.

As in my former report, *albumin* and *glucose* have occurred but rarely, although diligently searched for; in many specimens of urine with persistent low specific gravity where albumin was suspected none was found, while in dozens of others with a specific gravity over 1.030 and even up to 1.045, there was no sugar. The studies show that there may be very great functional disturbance of the urine, indicating gross metabolic disorder without any organic disease, and my clinical experience is that as these are corrected by proper hygienic, dietetic, and medicinal measures, the existing dermatoses yield with corresponding readiness.

The microscopic crystalline elements found in the urine are often of import, and aid in determining the integrity of metabolic processes. Thus, *oxalate of lime* represents a diminished activity of oxidation, although it is recognized, of course, that oxalates may appear in the urine after over-indulgence in certain foods; but its repeated occurrence in connection with uric acid crystals always shows a condition of suboxidation in the economy, which is of importance in connection with many dermatoses.

The *urates* and *uric acid* found microscopically may or may not have significance, as their presence does not necessarily indicate an increase of uric acid in the urine, and again they may be caused by variations in diet. But again, they may be very significant when they are in great excess without dietary cause, as indicating imperfect metabolism of exogenous or endogenous purin products, and clinically we know that when they are thus in excess certain dermatoses are proportionately severe or rebellious.

A deposit of *phosphates* likewise may not be of clinical significance, or may indicate bladder trouble; but more commonly a persistent or oft-repeated deposit indicates a lowered nerve vitality, which may have a very great bearing on certain diseases of the skin.

The problems in metabolism occurring in connection with certain diseases of the skin can probably never be completely worked out by the test tube and microscope, with the accuracy that we could desire, or even to a degree commensurate with that obtained in some other scientific branches, but even thus far, urinary analysis has given us clues which if carefully followed up are often of the greatest service in understanding the real pathogenesis of certain dermatoses.

At the last meeting of this Association<sup>1</sup> Dr. Duhring made a

<sup>1</sup>DUHRING. *Jour. Cut. Dis.*, 1901, xxvii, p. 379.

most earnest plea for the study of certain diseases of the skin along the lines of internal causation, as connected with disturbances of metabolism, calling attention to the rebelliousness of certain inflammatory dermatoses under the treatment too often given. He very properly contends that these cases cannot be satisfactorily and permanently cured until the pathological causes are modified or relieved. It is to exactly this aspect of dermatology that I have long striven to direct serious attention, and again urge that most careful consideration be given to the problems presented by the deranged metabolism constantly discoverable in patients with various acute and chronic diseases of the skin. That these problems are not yet satisfactorily solved is evident from observation and study of multitudes of cases that have previously been treated by others. That they are not yet perfectly solved is no proof of their non-existence, for very many astute clinicians have long recognized their existence, and more or less unconsciously have worked through them to the very great advantage of their patients.

As stated in my former report, eleven years ago, these urinary analyses have not been made for the purpose of any such report as this, or really in the attempt to solve any of the problems academically, but solely for the purpose of intelligently treating the cases coming under my care. And from these thousands of volumetrical analyses of the urine I can honestly say that I have constantly received the greatest and most satisfactory assistance.

I had hoped to have time to illustrate some of the problems in metabolism by individual cases, of which I could cite any number, but must reserve them for another occasion.

531 Madison Ave.

#### DISCUSSION

DR. DUHRING said he had listened to Dr. Bulkley's paper with much interest, and regretted that the writer did not have time to bring out the details of the cases. The value of a paper of this kind lay largely in those very details, in regard to diet, etc., through which the attention of the profession at large could be directed to this very important subject.

Dr. Duhring said that this subject of metabolism in relation to diseases of the skin had interested him for many years, and he had long since ceased to study and treat such diseases—as he did years ago—from the standpoint of the lesions alone. The various disorders and changes in the internal systems and organs, and their relation to diseases of the skin, were of the greatest importance. He believed we had been in the habit of studying the skin lesions



too much, laying too much stress on their importance, and the general processes which constituted the cause of the lesions had been neglected. Still, he was well aware of the difficulties in the way. Dr. Bulkley had shown us one way, and it was to be regretted that other writers had not given us their views more positively and clearly on the subject. English writers had given more attention to this phase of the subject than French or German, and the speaker confessed that he had learned more in regard to the real causes of the inflammatory skin diseases from English authors than from any other nationality, possibly excepting our own.

The speaker said he had not had as extended an experience with the urinary tests in these cases as the reader of the paper, and he did not feel in a position to speak so positively on the subject. These careful volumetric analyses of the urine were no doubt valuable. Dr. Duhring said he could confirm that the quantity of urine excreted in twenty-four hours was not dependent on the amount of fluids taken, and from experiments in his own individual case, the amount of water he might drink in twenty-four hours, over a period of a week, bore comparatively little relation to the results of the volumetric analysis. In some other individuals, however, this might be entirely different. The influence of the nervous system upon the urinary secretion and excretion was well known and could be readily demonstrated.

The whole matter of metabolism, the speaker said, had been before us for twenty-five years and longer; the importance of it had recently been emphasized, and he expressed the hope that the younger men would place still more importance upon it. Personally, he felt that the relation of many inflammatory diseases of the skin to general medicine was an intimate one. The studies of most dermatologists was too largely confined to a study of lesions and their peculiarities, and sufficient attention had not been paid to general conditions and their relation to the various diseases of the skin. If we wished to permanently cure many of the skin lesions, we must study the patient and conditions within the body. He had long been dissatisfied with the usual local treatment in a large number of chronic inflammatory cutaneous affections.

DR. KING SMITH said that Dr. Sims Wood of London, England, in an address before the students of the Toronto University, had laid great stress upon the close relationship between the men who worked in the laboratory and the clinicians. He had always emphasized the importance of their working hand in hand, and had insisted that they should get closer together in working out the laboratory problems. If they did that, it would be a great step towards solving this problem of metabolism.

DR. HARTZELL asked Dr. Bulkley if he controlled the results he obtained by comparing them with the urinary findings in those who had no skin eruptions? The speaker said he was convinced that such a comparison would show just as wide variations in one as in the other. Also, he would ask, if it should be found later that psoriasis was a parasitic disease, what conclusions would he draw from the urine under those circumstances?

DR. POLLITZER said that while quantitative analyses of the urine might be very useful, they did not constitute studies in metabolism. In fact, they were utterly worthless for that purpose unless at the same time the diet of the patient was controlled, and the intake and output compared. The value of the work might be summed up in one of the statements made by the reader of the paper, namely, that no one modification of the urine had been found to be definitely associated with any disease of the skin—and this after some four thousand of these analyses.

DR. BULKLEY said there was no doubt about the wide variations in the urine,

even under normal conditions, but when these changes and modifications occurred under the diet as he had prescribed it, he thought he was justified in attributing them to an altered metabolism, as represented by the urine. He did not agree with Dr. Pollitzer that these urinary findings and analyses could not be regarded as studies in metabolism. Replying to Dr. Hartzell's question, Dr. Bulkley said he did not carry out any control experiments; he had simply had this work done to assist him in the more intelligent treatment of his patients. Regarding the ætiology of psoriasis, he had always maintained that it was an infectious disease, and had written to that effect many years ago. He thought that the individual lesions were undoubtedly infectious; he believed the disease was due to a local parasite, but that its growth depended on the proper soil. He shortly hoped to present his results in one hundred cases of psoriasis in private practice where the patients had been restricted to a purely vegetable diet, many of them without any other treatment whatever, local or internal.

In conclusion, he reiterated his belief that faulty metabolism was an important factor in connection with diseases of the skin.

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## PRURIGO: AND THE PAPULE WITH THE URTICARIAL BASIS.\*

By O. H. HOLDER, M.D., New York.

IT is the history of dermatological development that sooner or later each disease becomes for a time an object of especial interest. More accurate clinical observations are made, and the histopathology is exhaustively studied; then follows a period of decline, from which the disease emerges with or without a modification of its ætiology. The disease, prurigo, passed through such a period. It reached its height at the meeting of the Third International Congress of Dermatology, held in London in 1896, where it was chosen as the special topic of discussion. Since that time the disease has attracted little attention. A fair summary of the work of the Congress is that it is negative. The attempt to find a bacterial cause for the disease has failed, and the pale papule which had once held almost a pathognomonic relation to the condition was no longer considered of ætiological importance. In other words, prurigo was to be classified as a disease of neurotic origin, whose cause was unknown, and whose only real cutaneous manifestation was itching, to which and to excoriation all the lesions of the skin seen in the disease, including the pale papule, were secondary. This is the modern position, which is based on the consensus of opinion.

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It is, however, through the study of prurigo, that there has been differentiated out of the general group of papules a sub-group which is spoken of in dermatological literature and discussions as the papule with the urticarial basis. Riehl, in his work on prurigo, was the first to draw attention to and indicate the true nature of these lesions. He claimed that it was urticarial, and hence they were produced by a rapidly forming œdema of the cutis, and throughout the evolution of the papule its contents were and remained essentially fluid. This conception of Riehl's has been confirmed by all later investigators, and so the papule of prurigo has obtained a definite position among the lesions of the skin. Owing to its partial or complete absence of redness, it has received the name "pale papule," a name probably destined to disappear from dermatology. Its two leading characteristics are intense itching and the tendency to the development of a small vesicle at the apex of its rounded top. This apex, whether vesicular or not, is usually scratched off, allowing the escape of a drop of blood and a falling in the tension of the cutis, after which the papule is no longer palpable. When this happens, the local itching ceases, the papule undergoes involution, and all that remains is a small crust of blood marking the site of the papule. Finally, the blood crust falls off, and the skin, as far as can be seen, returns to a normal condition.

Now it has been found that similar, and probably identical, itching papules, having round tops which have a tendency to vesiculate, occurring singly and not in groups, appear in the course of other pruriginous affections. These lesions are spoken of indifferently either as the papule with the urticarial basis or the prurigo-like papule. They, with the true prurigo papule, make up the sub-group previously mentioned. It must be said that the formation of the group rests on clinical grounds alone, but it seems to be of value in diagnosis, because it brings the round-top papule in a clear position of contradistinction to the flat-top papule. It may further be said that, as a generic name for the flat papule, lichenification has already come into general use; latterly, papular urticaria is at times employed in the same sense for the round-top papule. Its use designates a condition of the skin rather than a disease, and no doubt gives rise to some confusion. Still no better or more comprehensive term has as yet been introduced.

The diseases in which the condition is apparent and open to identification are:

(1) Prurigo of Hebra—best seen in the disease as it exists in children.

(2) Prurigo mitis.

(3) Lichen urticatus—when papular and not developing small wheals.

(4) Many other itching dermatoses in which the papular urticaria occupies a wholly secondary and rather unimportant position.

Always present are three stages and their signs:

(1) Prepapular stage of itching, with its marks of excoriation.

(2) Papular stage—the round-top papule, with or without a vesicular or vesiculo-pustular apex.

(3) Post-papular stage, marked by a small blood crust.

Of the prepapular stage, it may be said that it is not open to histological examination. The papular stage, with all its modifications, as seen in prurigo, has been repeatedly examined. The post-papular stage has never been studied, although it may contain the solution of one of the most important questions in cutaneous histopathology, involving as it does the existence or non-existence of the cell necrosis in the rete body. Unfortunately, the only specimen of this stage ever in my hands was rendered worthless through faulty technique; I am, therefore, able to show pictures of the papular stage only.

As these pictures seem to throw light on both the nature and cause of papular urticaria, and also on certain physiological changes in the skin, I shall have to leave for a moment the subject of the paper, and take up another matter without which the correct interpretation of the photomicrographs is difficult. It relates to blood and lymphatic pressure.

Although physiologists draw largely from the phenomena of the skin in making up their own theories of the circulation, their conclusions have done little to assist dermatologists. It is, of course, known to every one, that pressure in the arteries and veins can, and has been, measured with great accuracy by pressure gauges, and a rough estimate made of the pressure in the capillaries as between the two. The lymph and extravascular pressure has not been measured, and the question has been much neglected. Now, in regard to the upper corium, all we can do is to apply the general law of physics. As there are no vessels sufficiently organized to have muscular coats, we deal entirely with capillaries having a single wall of epithelium.

These vessels, unable to support pressure, must receive the support from without; therefore the lymphatic and the intercellular fluids have approximately the same mean pressure as the capillaries, and, in turn, are supported by the final retaining wall, the rete, with its impervious cap of the transitional and horny layers. The entire fluid, then, in the corium, may be said to have a certain tension, governed by that of the capillaries. It rises and falls necessarily with that of the aorta, to which it owes its origin. This variation, being slight, has little importance, but there is another change which is of the greatest consequence; not only does it modify and determine the diseases of the skin, but it is perfectly apparent to histological students.

When the time for puberty approaches, the growth of the body begins to cease, and the heart enlarges; in consequence a relatively rapid increase in pressure occurs in all the arteries at this time and is transmitted to the entire circulatory system. It gives rise to changes in the skin which fall under two heads—those that are local and are included under the name of sexual ornamentation; the other general, and affecting the entire skin. This latter consists of all that makes up the difference between the skin of the child and the adult. But of these alterations only those which have a direct bearing upon the vessels and their distribution need be considered here. These changes consist in a general thickening of the walls of all the vessels throughout the lower as well as the upper corium, and the development of new capillaries in the interpapillary and subpapillary regions. Here exist the great characteristics of the adult skin. Where before the interpapillary spaces can hardly be said to exist, they now appear as areas projecting upward into the rete and containing well-organized capillaries and lymphatics. It is to the injection of these vessels that lesions owe much of their red color; also it is well known that in and around them many of the purely inflammatory diseases arise. On this papular-urticaria group they have a distinct bearing, for they not only determine the height of color of the lesion, giving a degree of redness of wide range, but in the adult they seem to slow down the final involution of the papule.

The whole question of pressure in movements of fluid has in the past been of great interest to me, and much of my work in the laboratory was directed to its elucidation. As regards the papule of prurigo, which has now partly lost its importance, a certain amount of success was attained. The relationship of the erector of the hair to



the lesion at large seems to be proved, but of course needs further confirmation. The photomicrographs, for which I am indebted to Dr. Fordyce, carry what proof I can present.

FIGURE 1. Papular stage (prurigo). This specimen was taken from the anterior surface of the thigh of a girl, seven and a half years old, who had been under treatment for prurigo at Randall's Island Hospital for months. During that time much of the harshness and dryness of skin, which was pronounced on her admission to the hospital, disappeared. The papule was discovered by herself about five o'clock in the morning, and was removed at ten, with the cutaneous punch. This makes it five hours old, and so it cannot be considered a very early lesion. The relation of the apex to the lanugo hair remained clearly evident in the various processes of treatment. It was therefore possible to so orient the specimen that the plane of the axis of the arrectores pilorum could be obtained. Of 408 sections making up the specimen, this was No. 197. The staining was methylene blue and eosin.

The details seen in this illustration are as follows:

1. The arrectores pilorum is hypertrophied, and its funnel-shaped insertion into the base of the lanugo hair is demonstrated, confirming the researches of Auspitz on prurigo. They are now considered merely a hypertrophy from overwork.
2. The lymphatics are in places open, suggesting the urticarial nature of the lesion.
3. The mantling of the vessels, always seen in prurigo.
4. The apex of the papule, consisting of the œdematous area of the Malpighian layer. This area is geometrically situated in regard to the muscle; if a perpendicular plane be erected at the centre of the muscle, it passes through the œdematous area of the rete. The part played by the muscle would seem perfectly apparent; the œdema must be due to its relaxation. Along its surface, about one-third of the distance from the follicle, is a place which suggests a mechanical injury to the muscle; it is shown in enlargement in figure 2.

FIGURE 2. Enlargement of muscle at point of possible trauma.

Now, can the phenomena of the urticarial papule be explained by the laws of mechanics? It is probable that they can.

The field of the œdema is clearly outlined by that of the influence of the muscle as it would be felt in the neighboring capillaries and lymphatics. The slight mantling of the vessels arises from the discharge of the peripheral portions of the capillary streams carrying the white blood corpuscles. Some are caught, and some pass on; the accumulation in this especial case is that of five hours. The almost immediate appearance of fluid in the rete at the apex is known through clinical observation. It is usually a matter of only seconds when the fluid reaches the surface, and often a few more when the apex is removed by the nails. The almost instantaneous flow of blood after excoriation indicates the open condition of the intercellu-

lar spaces connecting the œdema of the rete to the capillaries below. This continuity of fluids cannot be shown in sections.

Considered from the point of fluid tension, a sudden cessation of the supporting influence of the muscle causes a simultaneous drop of tension of all the fluids in the vicinity; the attempt to restore equilibrium finds expression in that movement of fluid which constitutes the œdema. This exuded fluid again obtains the mean capillary pressure, making the œdema more or less permanent. The return to normal can be and is reached by the resumption of muscular function and the slow draining away of the œdema. This drainage is undoubtedly rapid in all the area except that which lies directly above the muscle at the region of the apex, where the tension is increased rather than decreased by the resumption of the muscular activity. Here the drainage is slow, on account of its unfavorable situation. The fluid in the rete may disappear in three ways, which are obvious clinically. The fluid may finally drain away; it may be allowed to escape by excoriation, or it passes into a vesicle. Which-ever course is taken is obviously unimportant. This, briefly, may seem to be the passive movement of the fluid, a movement traceable to the tension of the blood stream, if we are to regard the papules as traumatic and distinctly non-inflammatory.

In conclusion, the writer would say merely that as far as his work on prurigo went it endorsed the views held by those who believe that the papules were solely due to traumatism of the skin—that is, in his opinion they should be, as they now are at times, classified under the term papular urticaria, a condition on which the paper and illustrations may throw a little anatomical light.

## SOCIETY TRANSACTIONS.

## MANHATTAN DERMATOLOGICAL SOCIETY.

January, February, March, and April, 1910.

ALBERT CHARLES GEYSER, *President*.

**Onychia Syphilitica.** Presented by DR. PISKO.

The patient was a female, forty-three years of age, and the mother of eight living children. She was treated at the Harlem Hospital for a large ulcerated gumma of the leg, which had been present for the last five months. The nails of both thumbs and of the index finger of the right hand, were yellowish, lustreless, and worm-eaten in appearance. They were thin, friable, fissured and parts of the nail-bed were exposed. At the distal ends the nails were thinned, and the matrices somewhat thickened. The lunulæ were entirely absent.

**Neurofibromatosis.** Presented by DR. GOTTHEIL.

Henry B., aged sixty-eight, German, was admitted to the City Hospital on September 8, 1909. In so far as the patient could recollect tumors began to appear in his skin at the age of six, and had gradually increased in size and number since, but most rapidly during the last few years. His entire integument, including the face, scalp, palms and soles were studded with innumerable tumors, flat and sessile, and varying in size from a very small pea to an egg or larger. They were of two distinct varieties. There were pinkish, flesh-colored tumors, the smallest of which formed barely palpable hemispherical projections, and larger ones forming round pedunculated masses, while the largest produced large hanging, and evidently compound masses. A majority of the lesions were of this type. Also present were great numbers of smaller tumors, oval or rounded, of a more purple tinge, and which would disappear on pressure, revealing to the finger tip a sharply outlined lacuna in the cuticular connective tissue. No attempt had been made to count these tumors, but a conservative estimate would place their number at at least 2,000. The largest ones were on the back, and many of these were distinctly compound, the skin covering the large primary mass being studded with similar smaller tumors. On the cheeks, forehead, eyelids and nose, the lesions were few and small. The genitals, strange to say, were entirely free. On the palms and soles the tumors were comparatively few and small, and though palpable and even visible, were more or less hidden by the thick epidermis. The patient's general health was good, and even the large masses on the back did not seem to cause him any inconvenience.

This patient, therefore, had a dermal affection showing two distinct types of neurofibromata, of the usual kind and pseudo tumors due to localized dermal atrophies.

**Chancre of the Knee.** Presented by DR. KINGSBURY.

The patient was a female, seventeen years of age, and by occupation an operator in a cigar factory. According to her history she had had a small painless sore on the knee for nearly two months and a general eruption which was of the papulo-squamous variety, for nearly one month. The initial lesion was on the left leg about two inches above the superior border of the patella. It was an inch in diameter, elevated and slightly indurated. In addition to the characteristic eruption there was a general adenopathy, and considerable hyperæmia of the throat. The patient stated that several months ago her mother, with whom she slept, had had "sores" on her body and trouble with her throat.

**Lingua Geographica.** Presented by DR. PISKO.

Joseph D., forty-three years of age. In 1903 he had had a general macular eruption, which caused him no inconvenience, and which soon disappeared under anti-syphilitic treatment. On December 10, 1909, the patient came to the Harlem Hospital Dispensary; at that time he had a generalized, large papular, syphilitic eruption, mucous patches on the buccal mucosa, and a well-marked lingua geographica syphilitica. The entire tongue was denuded of its epithelium. Under anti-syphilitic treatment the condition was slowly improving.

**Initial Lesion of the Lower Lip; Nævus Unius Lateris.** Presented by  
DR. PAROUNAGIAN.

E. M., thirty years of age, waiter by occupation, American by birth, married, colored. The duration of the disease was three weeks. On the middle of the lower lip was a quarter-dollar-sized, circular infiltration. The entire lip was much swollen. The submaxillary and sublingual glands were enlarged, and a general adenopathy was present, but there was no evidence of a secondary eruption. Neither the source nor the mode of infection could be ascertained. The patient was an opium smoker and frequently used a pipe that had been smoked by another. The patient also had a very marked nævus unius lateris. Beginning on the right side of the neck it extended onto the scapular region, then to the axillary space, to the epigastric region, to the buttocks, to the popliteal space, to the ankle and finally to the outer border of the foot. The entire lesion was verrucous.

**Annular Syphilide.** Presented by DR. PISKO.

The patient was a colored male, twenty-eight years of age. He denied having had syphilis. About fourteen weeks ago he noticed a circinate lesion beginning around the angle of the mouth. This spread rapidly until, at the time of presentation, the lesion entirely surrounded the oral cavity, and new patches had developed on the cheeks and the forehead. The lesions were annular, and overlapped, retaining, nevertheless, their circular outlines. At the inner canthus of the left eye two distinct rings were to be seen. The lesions were composed of small discrete papules surrounded by black pigment. On the back and chest were isolated papules and on the left side of the neck there was a sharply defined erythema.

**Erythema Multiforme Iris of Remarkable Extent.** Presented by DR. GOTTHEIL.

Catherine M., thirty-four years of age; single; admitted to the City Hospital on September 4, 1909, moderately alcoholic. About the middle of May, 1909, a small erythematous patch appeared at the angle of the left eye, and a few days later similar spots appeared on the other side of the face and on the neck, the rest of the body remaining free. In the course of a few days these spots became elevated, enlarged, and confluent; until late in August the face, neck, and shoulders were covered with them. They were all circular in shape, growing into large polycyclic areas when confluent; they were hot, painful, and itchy, but never vesicular or pustular. Precisely similar lesions then appeared on the arms, especially affecting the extensor surfaces, and spread to the backs of the hands.

On admission to the hospital there was an intense erythema of the face, extending down to the neck, clavicles, and scapulae. This was distinctly polycyclic, as shown by the margins of the eruption on the forehead and upper chest; the outlines of many individual lesions, from walnut to egg-size, being visible in many places, and in others being marked by a thick circular wall of raised impetiginous crusts; removal of these latter showed merely a moist reddened surface underneath. The aspect of the face, neck and thorax, was remarkable; the sharply marginate and confluent reddened and raised areas, the more or less complete, elevated, circinate crusts presenting an appearance very like that of a pemphigoid eruption in its later stages. In spite of the patient's history, most of the lesions presented indubitable evidences of having been bullous at an earlier stage. In fact, at that time, the later appearing eruption on the arms showed, in among the reddened circular lesions already mentioned, vesicles and bullae of varying size, all of which were seated in the centre or occupied the entire area of an erythematous patch.



During September the eruption, retrogressing on the face, extended onto the chest and arms. The new lesions began as minute erythematous patches, spreading rapidly and soon becoming distinctly purplish in their centres. Central vesicles appeared, and these either dried up, or enlarged into bullæ, some of which grew to pigeon's-egg size before rupture. The iris appearance of the dark-purple centre and the pink, raised erythematous border was marked. Whether bullous or not, the lesions continued to spread, until the confluent erythematous areas with circular margins were produced. The large bullous lesions, after their rupture looked very much like those of pemphigus.

Below the waist line no lesions had as yet appeared; the palms, mucosæ, and scalp had been free. The temperature and the urine were normal; the general condition was good.

**Lupus Erythematosus.** Presented by DR. KINGSBURY.

The patient was a male, colored, waiter, and thirty years old. Six years ago the eruption appeared on the right cheek, and about four months ago the left cheek became similarly affected. The lesions gradually increased in size until they were as large as a silver dollar. Ointments were used for several years and two years ago the X-rays were applied. When presented, there were several indurated areas on the cheeks, considerable telangiectasis, and a number of superficial, small squamous plaques.

**Scrotal Tongue.** Presented by DR. PAROUNAGIAN.

D. B., Armenian, twenty-two years of age, denied a venereal history. The present condition of the tongue existed as long as the patient could remember. His sister was similarly affected. The lesion was entirely confined to the dorsal surface of the tongue and consisted of an accentuation of the central furrow, with numerous depressions and corresponding elevations, quite suggestive of the convolutions of the brain. In some of the clefts, small whitish patches were present, due to irritation. The tongue was somewhat enlarged. No subjective symptoms except slight discomfort when partaking of acid or alcoholic drinks had been noted.

**Erythema Induratum of Bazin.** Presented by DR. PISKO.

This patient had been presented to the Society at the March meeting of 1908. At that time there were about a dozen active lesions present, chiefly on the extensor aspects of her legs. Some of these had spontaneously disappeared, leaving purplish-brown pigmented areas, which would occasionally crust over. There had been no ulceration since the patient was last presented.

About four weeks ago two fluctuating tumors, about one-half inch in diameter, appeared on her lower limbs; these were incised and were now slowly healing. These lesions would leave, Dr. Pisko thought, the same scars as those from previous ulcers. The patient showed no manifestations of tuberculosis, and her dermatological affection had been greatly benefited by the administration of salicylate of soda.

**Alopecia Resulting From Favus.** Presented by DR. KINGSBURY.

The patient was a male, seventeen years of age, and born in this country, but of Russian parentage. His scalp had been affected for about ten years and several years ago the boy was treated at Randall's Island Hospital. When presented there were apparently no active lesions of favus, but the baldness was characteristic and extensive.

**Idiopathic Atrophy of the Skin.** Presented by DR. ABRAHAMS.

The patient was a married woman, thirty years of age, and a Russian by birth. The family and personal histories were negative. Six years ago a ring of erythema appeared on the dorsum of the right foot close to the toes. After a time the redness faded and the skin remained dry and wrinkled. Since then this phenomenon of hyperæmia followed by atrophy had occurred several times, but always in a different location. When presented, almost the entire skin of the extremity was atrophied and wrinkled. The line of erythema was still present at the knee where the process was active.

**Frambæsioid Syphilide.** Presented by DR. OCUS.

The patient was a married man of fifty-two. He had had a chancre thirty-three years ago. The duration of the present condition was five months. The whole of the upper as well as the left side of the lower lip was studded with dark-red, corrugated, elevated nodules, many of which had coalesced until the entire condition resembled a solid tumor.

**Erythema Induratum.** Presented by DR. GOTTHEIL.

The patient was a male, twenty-four years of age. Three years ago a small nodule appeared under the skin of the forehead. This grew slowly and became slightly red and finally broke down, exuding scro-pus and then slowly healed. Similar lesions had since appeared on his arms, face, back, legs, and ears. Five or six were always present in various stages of development, sometimes as many as ten would be noted at one time. All ran the same course, lasting about four weeks and leaving a pigmented scar. Small doses of potassium iodide were administered dur-

ing the past year without much effect. When presented, there were a number of scars on the elbows and knees; these were irregular in outline, some pigmented, all marking the site of former lesions. Several active lesions were present on the extremities in various stages of development; the smallest as painless, subcutaneous nodules, others as open, discharging, fairly deep ulcerations, and still others in various stages of healing. The course of these lesions was not that of subcutaneous gummata, nor was it characteristic of lues. The case was presented as one of erythema induratum of unusual course and distribution.

**Psoriasis Rupioides.** Presented by DR. PISKO.

Rose C., nine years of age, had had a recurring skin eruption since she was two years old, well marked about the knees and elbows, and occasionally spread over the entire body. When first seen at the Harlem Hospital Dispensary, the patient showed, on both legs, sides of the chest, abdomen, upper part of the right thigh, both knees and elbows, yellowish patches covered with cone-shaped, oyster-shell-like crusts. Besides these there were typical psoriatic lesions over the entire body, including the palms and soles.

**Tuberculosis Verrucosa Cutis of the Foot.** Presented by DR. KINGSBURY.

The patient was an Italian by birth, by occupation a clerk, and eighteen years of age. He stated that he had trouble with his right foot for nearly fourteen years. Four years ago the fourth toe was amputated and two years later an eruption appeared over the corresponding tarsus. When presented, there was a characteristic warty plaque, of irregular shape, about three inches long and two inches wide.

**Bromoderma Tuberosum.** Presented by DR. OULMANN.

The patient was a woman, twenty-four years of age, who after taking numerous small doses of a bromide mixture, had an eruption appear on her legs. At first this consisted of small papules which, in a week's time, developed into firm nodules, one inch in diameter and covered with crusts. The patient also exhibited a purpura which had developed simultaneously with the bromide eruption.

**Lepa Maculosa Apparently Improved by Nastin.** Presented by DR. GOTTHEIL.

The patient, Charles W., was a Chinaman, twenty-nine years of age, and had been for some time in the City Hospital. Three years ago he first

noticed a "nervous tingling" in his right hand, which had gradually become "clawed" during the last year. The spots on his body had existed, to his knowledge, some eight months. An examination revealed marked atrophy of the intermetacarpal muscles of the right hand, which was contracted; thickening of the median nerve of the right arm; and maculo-anæsthetic skin lesions. The latter consisted of large polycyclic, stained areas on the trunk, buttocks, and right arm. They were more or less circular, dark brown in their centres, and with an outer brown rim separated from the central stained area by a broad band of apparently normal integument. The back of the right hand and arm showed an extensive similar brown discoloration. There was incomplete anæsthesia over the stained areas; and the Hansen bacilli had been demonstrated in the sections taken from them. At the time of his admission to the hospital, in the early summer, tubercular lesions were beginning to appear on the superciliary region. His general health was perfect.

The treatment, Dr. Gottheil said, had been nartin B, the contents of one ampulla being injected subcutaneously every five days; and there had been a distinct improvement in his condition. The emerging tubercles had entirely retrogressed, and the color of the stained areas had lightened by several shades. There had been no change in the anæsthesia or the atrophy, though neither had apparently advanced. It was entirely open to question, of course, whether the improvement had been due to the medication or to the better hygienic and nutritive conditions under which the patient had been living. Many years' experience, however, had demonstrated to the speaker's satisfaction the entire inefficiency of the older remedies employed in the malady; and nartin was certainly worthy of further trial.

#### **Syphilitic Infection in a Heredo-Syphilitic.** Presented by Dr. Ochs.

The patient was a young man, twenty years of age, and was born three months after paternal infection. As a child he had signs of heredo-syphilis. A year ago he developed a chancre for which he had little treatment. When first seen, a few months ago, covering the entire tongue, part of the buccal mucosa, including the lips, were numerous mucous patches. The case was interesting on account of the infection in a heredo-syphilitic. The disease, Dr. Ochs said, appeared to be of a very mild type.

#### **Zoster Menstrualis Recurrens.** Presented by Dr. Pisko.

Mrs. A. F., thirty-six years of age. She first came under observation at the Harlem Hospital Dispensary in September, 1909. She then stated "that for the last eight years, with every menstruation, she would have severe pains in and 'sores' on her buttock." An examination, at that

time, showed a vesicular eruption on the right gluteal region. The speaker had seen the patient every two or three weeks since. During the last three menstrual periods a grouped vesicular eruption had appeared. Some of the lesions had become infected, necessitating surgical interference.

**Epithelioma of Lower Lid Treated with X-Rays.** Presented by Dr. GEYSER.

Mr. M., fifty-eight years of age. Sixteen years ago he received a blow from a snow ball in the left eye. This refused to heal, was enretted and otherwise treated. In 1905 it was treated with the X-ray at Mount Sinai Hospital. It healed very promptly and remained so for about one year and then broke down again. It was doing very well now, the speaker said, under the direct contact method of using the X-rays with the Cornell tube.

**Acne Keratosa, Acute Form.** Presented by Dr. GOTTHEIL.

David H., five months old, was brought to the Lebanon Skin Clinic on February 15, 1910, for seborrhœal eczema of the head. The present eruption appeared suddenly about February 20th.

Examination. February 27, 1910. There was a general eruption composed of papules of varying size. It was most abundant on the backs of the hands, the extensor surfaces of the forearms, and the extensor surfaces of the lower legs; there the lesions were so abundant, large, and closely sown as to occupy at least half of the entire skin area. There were a few lesions on the face, grouped on each cheek, near the ears; the back of the scalp was fairly well covered with them; there were several on the soles, and one on one palm, though here they were not nearly so prominent and characteristic as elsewhere; and on the trunk, back and front, the gluteal regions, etc., there were only a few isolated and small examples. All the circumoral regions were noticeably free from lesions, as were the genitals; the great majority of the lesions were grouped on the extensor surfaces of the limbs. Their entire number was considerably over one hundred.

The individual lesions varied in size from a minute, barely visible pinpoint vesicle to a pink, French-pea-sized, hard, fleshy papule with a brownish centre. The smallest were really vesicles, on an apparently normal skin base; incision permitted the exudation of a minute drop of clear serum. Larger ones were distinct papules, harder and pink in color; they contained no serum, and there was a little sinking in and discoloration at their summits. In the very largest ones there was a distinct, hard, central keratotic plug. Removal of this plug left a minute gaping orifice at the apex of the tubercle. There were no black spots, pigmentations,



or other lesions; and the eruption was evidently not pruriginous. There was no history of contagion or of other cases in the family.

Some years ago, Dr. Gottheil said, he had published the history and photographs of a marked case of this kind in an older child. The lesions and their location were similar, but the affection was chronic and of slow growth. Brooke's well-known case, published in the International Atlas of Rare Skin Diseases, showed the peculiar black spots, and was of contagious nature, as shown by the presence of several cases in the same family. The real nature of these lesions, and their relation to other keratoses and to psorospermosis, were still in need of elucidation. Of especial note in the case here presented was the age of the patient, the acuity of the onset, the absence of any other lesions and of any evidences of contagion.

#### **Urticaria Pigmentosa. Presented by DR. GOTTHEIL.**

Anna J., seven years of age. The patient showed some fifteen pigmented lesions on the back and buttocks, almost all of which were pure stains, dark yellowish-brown in color, and varying from one-quarter of an inch to an inch in size. There were one or two, also, on the flanks and on the scalp. One lesion, which appeared the day before the case was presented, was but slightly pigmented and was distinctly of a wheal character; itching was intense here and scratch effects were present. The mother said that the first "spot" was noticed when the patient was ten days old; that since then there had been a constant slow succession of the lesions, one or two appearing every week or so; that they were all very pruriginous at first; and that they all left brown stains. No information as to the permanence of the stains was obtainable. If the history were correct, they must have disappeared in a few months, or the entire integument would be pigmented. There were no faint disappearing stains, though some, evidently older, were lighter than others. It was probable, Dr. Gottheil said, that the history was defective; the child may have had previous attacks of the same affection, but their marks had vanished; those present when the case was exhibited represented the lesions of the last few weeks or months.

#### **Telangiectasia and Pigmentation of the Neck from X-Rays. Presented by DR. KINGSBURY.**

This patient was thirty-four years of age. The enlarged cervical glands had been present since childhood, and twelve years ago an operation was performed, those on the right side being removed. About five years later the glands of the left side were treated with the X-rays, the patient receiving a dozen or more exposures, the last one being followed by

a severe radiodermatitis. When presented to the Society, there was a large area of telangiectasia with considerable pigmentation on the neck and cheek. The case was formerly of some medico-legal interest on account of the woman's suit against a prominent radiographer for damages.

**Epithelioma of the Lower Lid, Apparently Cured by Fulguration.** Presented by DR. GEYSER.

Mrs. J. P., married, fifty years of age. Fifteen months ago, the patient's family physician noticed a nodule near the inner canthus of the right eye which had been of very rapid growth. This had been ablated two or three times, but always returned. Three months ago Dr. Geyser had given six applications of the high-frequency current for its fulguration effect. When presented to the Society it was exceedingly difficult to locate the previous site of the lesion.

**Late Secondary Circinate Syphilide, Limited to the Face, Forearms and Palms.** Presented by DR. PISKO.

Mrs. Hattie O., thirty-six years of age, married one year, denied syphilis. An examination showed the presence of mucous patches on the left tonsil; small circinate lesions about the mouth, composed of miliary papules; larger circinate lesions of the forearms and palms, composed of medium and large-sized papules, some of which were covered with scales.

**Alopecia Universalis.** Presented by DR. KINGSBURY.

The patient was a photographer, twenty-eight years of age. Seven months ago he first noticed a small bald patch on the top of his scalp and shortly after several other similar lesions appeared. The hair also began to fall from his eyebrows, eyelashes, pubic and axillary regions, and in about two months he was completely bald. The man, exceedingly neurotic, exhibited with considerable satisfaction a rather exhausting series of photographs taken by himself, illustrating the different stages of the infection.

**Nævus Papillomatosus Lingualis.** Presented by DR. COCKS.

The patient was a male child, eight years of age, and born in Russia. When the patient was two weeks old the mother noticed that he nursed with difficulty. On examination at that time a growth involving the entire right side of the tongue was discovered. Nothing had ever been done for the relief of the present condition. When presented to the Society the tumor was hard, considerably elevated, non-vascular, and did not cause any pain. The galvanic cautery, under local anæsthesia, was now being used and the speaker said that the mass was shrinking perceptibly.

**Partially Exulcerated Gumma of Unusual Size.**

Presented by Dr.

GOTTHEIL.

Sarah M., forty-seven years of age, was admitted to the City Hospital on September 23, 1909. The patient's left leg was swollen to more than twice the size of the right. From the upper part of the lower third of the leg to well down on the dorsum of the foot near the toes, and extending around on both sides to beyond the maleoli, was an immense, exulcerated tumor mass. On the dorsum of the foot, at its lower margin, there was a large tubercular margin, an inch or more in width, moderately hard, smooth on the surface, and slightly purplish in color, which evidently was a part of the gumma which had not broken down. The other margins had the same character, but to a less extent. Around the tumor the skin was indurated, purplish, and had evidently been the seat of a long-standing, chronic inflammation. The central portion of the tumor was the seat of a deep, ragged, irregular ulceration, covered with detritus and necrotic tissue. Prompt and steady improvement had occurred under the usual anti-syphilitic medication.

**Cheilitis Exfoliativa of the Upper Lip.**

Presented by Dr. OCHS.

This patient, a boy nine years of age, presented a firm swelling of the entire upper lip which had existed for the last two years. The swelling had gradually increased in size, so that the upper lip protruded about one inch further out than its mate. The mucous membrane was very dry, parched and cracked, and there were a number of deep fissures. The disease was sharply defined and ended at the vermilion border of the lip.

**Pruritus in a Case of Lichen Planus, Relieved by the High-Frequency Current.**

Presented by Dr. GEYSER.

The patient, Miss E. M., was eighteen years of age and single. She stated that about ten years ago she had been severely bitten on the right leg by mosquitoes. This was immediately followed by lesions which were probably pyogenic in nature. Severe or intense pruritus began at that time and had been present ever since. When presented to the Society, a well-marked lichen planus hypertrophicus was present which covered the anterior and lateral surfaces of the right lower limb between the knee and the ankle. The high-frequency current had been applied twice, the carbon-point electrode being used for the purpose of ultimately destroying the skin covering the lesion. It would, Dr. Geysler said, require several applications to accomplish this purpose. The interesting feature, however, was that since the first application the patient had been entirely free from itching.

**Dermatitis Herpetiformis.** Presented by DR. Pisko.

Gertrude E., nine years of age. The patient had had some skin affection since she was eight months old. According to the history, the disease began on the face as an eczema; later, it occurred as a vesicular eruption on the body. When presented, the elbows, neck, scapular regions, and popliteal spaces were covered with crusts, evidently made up of dried vesicles. A very recent grouped vesicular eruption was, still present behind the ears, on the upper portions of the internal aspects of both thighs, the abdomen, and the left inguinal regions.

**Chancre of the Upper Lip.** Presented by DR. Ochs.

The patient, a young man eighteen years of age, was exposed to infection about eight weeks ago. One week later he developed a urethral discharge which disappeared under treatment. About the same time the patient noticed a small abrasion at the centre of his upper lip; this rapidly grew larger, became indurated, was at no time painful and when presented to the Society it was the size of a ten-cent piece. He also presented a general adenopathy and a characteristic, general maculo-papular, and a squamous eruption.

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**REVIEW**

of

**DERMATOLOGY AND SYPHILIS.**

Under the Charge of GEORGE M. MacKEE, M.D.

**SYPHILIS OF THE SKIN AND MUCOUS MEMBRANES,  
ATROPHIES, HYPERTROPHIES, BENIGN AND  
MALIGNANT NEW GROWTHS.**

By UDO J. WILE, M.D., New York.

**Pulsating Cutaneous Tumors of Peritheliomatous Type Secondary to a  
Tumor of the Kidney.** BRANDEIS and POUGET, *Ann. de dermat. et  
de syph.*, 1910, i, No. 10, p. 506.

The authors report a very extraordinary case in an old woman of sixty-eight years. When first seen, the affection had been present two months and a half. At that time there appeared simultaneously upon the right thumb and the right thigh, small, red, infiltrated lesions which developed rapidly into distinct tumors without pain or itching. At a later

date similar lesions developed upon the scalp and upon the arm. The tumors were red or violet colored, rather irregular, mammillated and firm to the touch. The most striking characteristic, however, was a definite pulsation visible in the case of the thumb lesion, palpable in the lesions of the thigh and the scalp. The thumb tumor was very painful to pressure and a radiograph showed entire erosion of the terminal phalanx. During her sojourn in the hospital the patient developed profuse hæmaturia and painful micturition. Shortly after leaving the hospital she succumbed to a pneumonia and, unfortunately, an autopsy was not obtained. For histological purposes the tumor of the thumb and one from the scalp were studied. The sections revealed a tumor composed of cells resembling those of young connective tissue and arranged radially around the blood vessels. The endothelium of the vessels showed no hyperplastic changes. The authors seem to have had difficulty in deciding whether the neoplasm was epithelial or connective tissue in origin. The fact that clinically the tumors pulsated they regard as evidence in favor of a connective tissue origin, although a study of the cells themselves left this question in doubt. The location of the tumor cells suggests to them a mesodermic neoplasm arising from the perithelial layer of the blood vessels. The symptoms of pain and hæmaturia observed during life suggest that the primary growth may have been located in the kidney.

**The Extensive Syphilitic Ulceration of Tertiary Nature.** A. RAVOGLI,  
*Ohio State Med. Jour.*, Nov., 1910, p. 592.

In a paper read before the Ohio State Medical Association, the author states the general facts concerning late syphilitic ulcerative lesions, particularly those in which there has been no history of lues, previous to the outbreak of the late manifestation. Such cases he groups in the class of "syphilis d'emblée." The theme of the paper is illustrated by the presentation of a case of late syphilis in which, without previous history, there developed extensive gummatous ulceration of the inguinal and genital region. The lesion was evidently the seat of secondary infection which retarded its involution under anti-syphilitic treatment. Accordingly, under a general anæsthetic, the lesion was thoroughly enucleated, after which, under vigorous anti-luetic treatment, it promptly healed. From the study of this and other similar statements the author draws the following general conclusions:

"First: The onset of a large tertiary ulcer has been the first manifestation of syphilis—syphilis d'emblée.

"Second: That the spirochaetæ often produce a localized manifestation in an ulcerative form spreading by regional infection.

"Third: That the condition of denutrition of the system has great influence in the occurrence of syphilitic ulcers.



"Fourth: That the obstinacy and the rapid spreading of the syphilitic ulcer is also due to a septic infection.

"Fifth: That the anti-syphilitic applications alone are not sufficient to bring these ulcers to recovery, but surgical interference is necessary."

**Ætiology of Cancer of the Skin.** LEO LOEB, *Jour. Am. Med. Assn.*, 1910, lv, No. 19, p. 1607.

This paper was read before the Section on Dermatology of the American Medical Association, and is a complete review of the various theories concerning the origin of the epithelial forms of cancer. The author divides the causes into external and internal factors. The external factors include light rays, chemical irritants, and mechanical stimuli.

The internal factors are much less well understood. Localized congenital and hereditary conditions may be grouped in this class. In xeroderma pigmentosum one may assume the production internally of a substance which sensitizes the skin and certain mucous membranes to the action of light.

Loeb then discusses briefly the embryonic theory of Borrmann, Ribbert's theory of the carcinoma cell, the factor of age in cancer, the theory of the parasitic origin, and the attempt to explain the development by anatomic changes.

It is impossible in a brief review to do justice to this paper, as it is one which will not admit of anything save a verbatim transcription, which is impossible in the space allotted. To be properly appreciated this article must be read in its entirety.

The author embodies his conclusions in the following words:

"Through experiment alone we can eliminate the variable factors one after another, and slow as the experimental procedure may appear, it will ultimately prove to be the only safe guide in our work. I do not, however, underestimate the value of histologic investigations, which in many other directions have proved to be of inestimable value, and which are also necessary as an adjunct in the ætiologic study of cancer, but in the latter only in a subsidiary way. Until further experimental investigations shall enable us to discriminate with greater accuracy between the various factors and their mode of action, one must be content to state that in many cases of cancer long continued external irritation is of the greatest ætiologic significance; that long-continued stimulation of the epidermis may lead to the formation of cancer; that it is, however, at the present time not possible to state how much of this stimulation is exerted directly on the epithelial cells through external agency, and how much is an indirect effect caused by changes in the organism as a whole or in the underlying connective tissue. But even if these latter changes should prove to be of greater significance, and not to be merely coördinated changes, they must be assumed to stimulate by physico-chemical processes the overlying epidermis.

Until we know more of the more distant effects which long-continued external stimulation may exert on cells, and which may find expression only after a very protracted period of latency, we must beware of too detailed explanations. We can, however, be certain that as the result of long-continued irritation the epithelium changes in its proliferative power and that such changes are transmitted to the following cell generations apparently indefinitely."

**Treatment of Malignant Growths of the Skin from a Dermatological Standpoint.** W. A. PUSEY, *Jour. Am. Med. Assn.*, 1910, lv, No. 19, p. 1611.

The author considers and reviews the various methods of treatment of cutaneous cancer, as practised not by the surgeon but by the dermatologist. Of internal remedies the only one worthy of consideration is arsenic. This drug "administered in large doses, undoubtedly has a definite effect on the nutrition or growth of the skin . . . arsenic is entitled to mention as having a possible effect on the course of the disease—an effect not radical but inhibitory."

The various external remedial measures, including excision, cauterization, freezing by solid carbon dioxide, and the use of the X-ray, are then considered in detail by the writer, and the indications for each pointed out. For the purpose of treatment Pusey divides epitheliomata into two classes. First, those in which treatment requires only the destruction of the growth in its primary location. In such cases he believes the X-ray to be the best method of treatment, with the use of a caustic or curettage followed by a strong caustic as the second method of choice. The occurrence of metastases in the neighboring glands constitutes a contraindication for such treatment, and thus eliminates from it most of the lesions occurring on the muco-cutaneous surfaces.

The second group includes those cases in which rational treatment requires the removal of contiguous glands, or as in the case of the orbit, the removal of underlying tissue. The treatment of such cases is obviously surgical. Except for such instances, however, Pusey speaks for the use of the X-ray as possessing manifold advantages over other procedures. In cases thus treated by him, 72 per cent. showed successful results after the lapse of three years; in this number were many cases deemed incurable by other methods of treatment.

**The Surgical Treatment of Cutaneous Malignant Growths.** J. C. BLOODGOOD, *Jour. Am. Med. Assn.*, 1910, lv, No. 18, p. 1615.

The author's paper is based upon the personal observation of over one thousand cutaneous neoplasms treated surgically. Simply classified, the material comprised the following:

Malignant pigmented moles.....	65 cases.
Sarcoma of the derma.....	45 cases.

Epithelial tumors of the skin and mucous membranes 812 cases.

Of the cases of malignant pigmented mole there is not one definitely cured case. Besides these sixty-five cases of malignant moles the writer has collected seventy-five benign cases operated upon by him of which there have been no records of recurrence or of internal metastases. Bloodgood urges wide excision for all benign moles as a preventive measure, and as a safer method than others, such as cauterization, X-ray, solid carbon dioxide, liquid air, electrolysis, etc.

In discussing the treatment of moles which show beginning malignancy, or in which malignancy is suspected, Bloodgood advises complete dissection "en bloc" of the growth, including the neighboring lymphatics, a zone of uninvolved skin and a wider area of subcutaneous fat, also the fascia, and in certain cases, the muscle, an operation similar in plan and scope to Halsted's operation for breast carcinoma.

Of the forty-five cases of sarcoma of the derma studied by the author fourteen were angiosarcomata, and of these but one resulted in complete cure following operation. Among twenty-six cases of fibro-spindle-celled sarcoma, twenty were permanently cured by a local operation only. Of sarcoma of the skin with a history of a congenital nœvus there were six cases, in only one of which was the patient cured; in all, the sarcoma was of the perithelial type, the cellular elements being small and round, very much like those of lymphosarcoma. In eight cases of angiosarcoma there was no history of a previous congenital nœvus; all were of the most malignant type of small round cell tumor, and in none was a permanent cure effected. Nineteen cases of sarcoma arose from scar tissue, of which sixteen remained well after operation; in all of the cured cases the tumor was of the fibro-spindle-celled type. Local operation sufficed to cure these cases.

Concerning epithelial tumors, Bloodgood's experience includes 684 cases. He classifies them according to their pathology into carcinoma basocellulare, carcinoma cubocellulare, and carcinoma spinocellulare. The basal cell type is the least malignant of these and for it a local operation is sufficient; the squamous or spindle cell variety is the most malignant and demands radical excision. For the former type of tumor which includes the rodent ulcers, other measures might also be used, but the writer prefers the knife in all cases save in those in which the ulcer has reached such a huge size that removal by ablation is not possible. He emphasizes the fact that incomplete excision with the knife is more dangerous than a failure from the other methods. The paper is concluded with an analysis of the cases reported with reference to their malignancy and treatment according as these vary with the site of the lesion.

**Pathology of Malignant Diseases of Non-Epithelial Origin.** F. B. MALLORY, *Jour. Am. Med. Assn.*, 1910, lv, No. 19, p. 1621.

The various tumors of mesenchymal origin are discussed in brief by the writer, who makes an especial plea for correct nomenclature. The cell type is the one important element in every tumor. From it the tumor should be named; not from some peculiarity of minor importance, such as the method of growth, arrangement of cells, or form retrograde change. The tumors described and discussed include fibromata, sarcomata, gliomata, lymphocytomata, lipomata, rhabdomyomata, leiomyomata, melanomata, and the various types of endothelioma and neurocytoma. The main characteristics of all these tumor types are described as well as the cells from which they spring.

Following are Mallory's conclusions:

"It is advisable so far as possible to discard certain loose and indefinite terms frequently used in connection with tumors and strive for definite diagnosis and exact terms. For example, spindle-cell sarcoma refers only to a tumor with cells of a certain shape. The commonest tumor which grows rapidly with cells of this shape is the fibrosarcoma, but other tumors which may have cells of this shape are the chondrosarcoma, the osteosarcoma, the hemangio-endothelioma, the leiomyoma, the rhabdomyoma, and the glioma.

"A round-cell sarcoma is most often a lymphocytoma, but other tumors which may have round cells are the osteosarcoma, the leiomyoma, the glioma, the myeloma, and the neurocytoma.

"The so-called perithelial angiosarcoma is in my experience most commonly a melanoma, but other tumors which may grow in this form as the result of malnutrition (necrosis, dissolution, and disappearance of cells at a distance from the blood vessels) are fibrosarcoma, glioma, neuroma, and carcinoma (of breast and epidermis).

"True tumor giant cells occur in many tumors, such as glioma, fibrosarcoma, and lymphocytoma. In the so-called giant cell sarcomata, the giant cells are foreign body elements due to the fusion of endothelial leucocytes. They are not tumor cells and should not be named in the diagnosis. The tumor itself is usually a fibroma or a fibrosarcoma. It may be only inflammatory tissue full of giant cells. Probably the so-called epulis of the jaw is frequently of this nature, and not a tumor."

**The Pathology of Malignant Epithelial Growths of the Skin.** JOHN A. FORDYCE, *Jour. Am. Med. Assn.*, 1910, lv, No. 19, p. 1624.

The subject matter is here presented in the form of a lecture with lantern slide demonstration of the various types of cutaneous epithelioma.

The histories of many of the cases are related in full, and the clinical picture compared with the microscopic findings. According to the author the study of cutaneous cancer hardly bears out the theory of Cohnheim as to the origin of carcinomata in embryonal cell nests, although this theory would seem to hold good for tumors arising from nævi. His own studies lead Fordyce to the following conclusions:

"A study of cancer suggests to the observer . . . that no one agent is concerned in the malignant proliferation of epithelial tumors, and that cutaneous carcinomata have a multiple ætiology. The development of epitheliomata following exposure to sunlight, X-rays or other radiant energy is a strong argument against the parasitic nature of the disease. . . . Furthermore, the action of chemical substances on epithelium, for which they have a special predilection, such as arsenic, tar, scarlet-red, tobacco, etc., demonstrates that a variety of agents have the power to stimulate epithelial mitoses which may pass into malignancy. Cancers which develop on scar tissue or antecedent conditions of the skin like lupus, syphilis, etc., suggest that we are dealing with misplaced cells in some cases and in others with degenerative processes which lead to the abolition of the functional activity of the cells, which is followed as a consequence by vegetative activity, according to the theory of Oertel, Adami, and others. In primary multiple epitheliomata we have several foci in which an infectious agent or some internal sensitizing agent may have acted on the cells and rendered them susceptible to a local factor."

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## GENERAL THERAPY, BACTERIOLOGY AND PARASITOLOGY.

By R. C. JAMIESON, M.D., Detroit.

### Treatment of Acne Vulgaris with Acne Bacillus Suspensions. M. F.

ENGMAN, *Interstate Medical Journal*, xvii, No. 12.

Engman differentiates between the true acne, which is always associated with comedones, and the so-called acne due to pustular conditions.

He considers acne to be a true parasitic disease due to a specific organism which can be found around the periphery in well-developed lesions, but in early lesions the organism can be easily found in the small follicular plug. In still older lesions the bacilli are protected in the periphery of the nodule and are then difficult to destroy.

Diet and diatheses have been, and still are, given too much credit for causing the disease, but are responsible only so far as they encourage the growth of the bacilli.

During Engman's work with Unna on the subject of acne he discovered a very small bacillus in the comedones which was believed to be



the cause of the disease on account of its location and relationship to the lesion. The organism was grown only with the greatest difficulty.

Gilchrist in his investigations was successful in cultivating the bacillus and believed that it caused the lesions of acne vulgaris for the following reasons: The bacilli were found in the pus from the lesions, also in microscopical sections from comedones and nodules; it was pathogenic to mice and guinea pigs and was agglutinated by serum from acne patients.

Engman considers the organisms described by Gilchrist, Sabouraud, Unna and himself, to be the same in each case. He has never been able to make luxuriant sub-cultures, but later on by the use of staphylococcus vaccine, which rendered the acne lesions free from staphylococci, he was able to grow the bacillus more successfully without contamination.

The treatment with the suspensions of acne bacillus, using a proper technique, has given some brilliant results. In very favorable cases involution is so rapid that more scarring results.

Briefly, his technique is as follows: The first inoculation is never over three millions, given two or three days after cultures have been taken. If more than three new lesions appear in the negative phase the dose is too large. On the third day lesions are opened and manipulations are carried out to bring more blood to the affected skin (massage, heat, etc.). On the fifth to seventh day new lesions will appear (stage of depression), and a second dose of three to five millions is given. This dose is repeated several times as indicated by the negative phases, but if, after several doses, new lesions appear after the third day, a dose of seven to ten millions should be given. Small doses at five to seven day intervals with a short negative phase have given the best results. Stock emulsions were used.

The results obtained are accompanied by disappearance of the oily, yellowish, and muddy condition of the skin, while the texture of the skin improves as well as the seborrhœa of the scalp.

In his study of 208 cases he has seen no reason to change his views regarding the aetiological rôle played by the acne bacillus, and in cases with indifferent result he thinks it is the fault of the technique and not the fault of the method.

#### **Action of Ehrlich's Arsenobenzol in Psoriasis and Lichen Ruber Pilaris.**

KARL SCHWABE, *München. med. Wchnschr.*, lvii, No. 36.

On account of the use of arsenic in the treatment of psoriasis, Schwabe decided to try the effect of one large dose of the drug on a case of fourteen years' duration. The case was one of unusual severity and had received all kinds of treatment. The lesions were scattered over the whole body and head, the nails had fallen, and there was marked scaling and infiltration of the plaques, but no itching or involvement of the mucous membranes.

The patient was given .4 gram of "606" intramuscularly. Considerable pain and infiltration followed the injection, which was accompanied by a rise in temperature to 38.4° C. For twenty-four to forty-eight hours after the injection the clinical symptoms appeared exacerbated. After three days the eruption was involuting, the scaling had increased but the infiltration had lessened. There was no change noticed in the next two days; no tendency to heal in the centre and no change in the border, so that after ten days the patient was pronounced not cured.

The second case was of only two years' duration and received .5 gram of "606." As in the previous case there was a period of exacerbation for two days, followed by an improvement for four or five days, which was not permanent.

A case of lichen ruber pilaris was also given .5 gram of "606" without any appreciable effect.

Schwabe concludes that the results are more interesting from an aetiological point of view than from a therapeutical standpoint.

**Use of Thiosinamin in the Treatment of Cicatricial Formations Following Burns.** J. E. MEARS, *Medical Record*, 1910, lxxviii, No. 2, p. 902.

The author gives a report of a case of a very extensive burn of the arm with resulting raised cicatrices. The only treatment which was considered to be of any value was thiosinamin, which was administered intermittently for about three years. It was used internally in doses of one grain (reduced later to one-half grain) and externally as an 8 per cent. ointment, which was later reduced to 5 per cent. The hypodermatic method was not employed on account of the inability to give continuous treatment.

The result after three years' intermittent treatment was to level the scarred surface even with the normal skin and to cause the disappearance of the bluish tint of the scar. He hoped to obtain even better results.

**Dermatitis Herpetiformis in Early Childhood.** R. L. SUTTON, *Am. Jour. Med. Sc.*, cxl, No. 5.

The treatment of this rare condition as followed by other investigators as well as the writer is touched upon in this article. Hypothyroidism is often the cause of a chronic urticaria and in the absence or inactivity of the gland cutaneous lesions are apt to develop as a result of the toxæmia. Toxic agents at times are responsible for outbreaks of dermatitis herpetiformis. The author employed thyroid extract in six cases (one grain three times daily), having a supposed lack of secretion. There was subsequent improvement in five of them. Locally he used a lotion of 5 per cent.

tincture picis mineralis with calamine and zinc oxide powders, and although favorably impressed he considers it too soon to judge of the results.

**Ætiology of Elephantiasis.** G. C. SHATTUCK, *Boston Med. and Surg. Jour.*, clxiii, No. 19, p. 718.

The question in the ætiology of elephantiasis is the relation between œdema, hyperplasia of connective tissue, and lymphatic dilatation.

He summarizes as follows: The essential characteristics of typical, acquired elephantiasis are lymphangiectasis, hyperplasia of connective tissue, and chronic œdema, but the relation of these to each other in the production of elephantiasis is not clear. These changes may frequently be attributed to the interaction of stasis and inflammation. Stasis always occurs early and persists.

Inflammation may precede or follow stasis or may not be manifest at any stage of the disease. It may be acute or chronic and is generally traceable to bacterial infection. Either chronic stasis or inflammation may predispose to elephantiasis, but the disease does not always result even when they occur together.

There is reason to suppose that congenital weakness or anomalies of the lymphatics may play an essential part in the production of some cases of elephantiasis and such weakness or anomaly can be inherited.

Filaria is an important factor in the production of endemic elephantiasis of some regions, but is not essential to the occurrence of the endemic type of the disease. Elephantiasis in filarial regions results indirectly from filariasis through bacterial infection.

Sporadic, lymphatic elephantiasis and endemic elephantiasis are not essentially different.

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## OBITUARY.

DR. SIGMUND LUSTGARTEN.

SIGMUND LUSTGARTEN died on the 22nd of January, 1911, at his home, 656 Madison Avenue, New York City, from a complication of diseases, at the age of fifty-three. With him passed away a great seion of the most renowned period of the Vienna school; one of the widest known pupils of the famous Hebra-Kaposi class.

Dr. Lustgarten was born in Vienna, Austria, on the 19th of December, 1857, as the oldest son of a much esteemed merchant. The loss of his father at the time he was attending high school had a strong influence upon the seriously inclined youth, who thereby felt the responsibility of protection for his devotedly beloved mother, sister, and brothers fall upon his shoulders. In 1875 he entered the medical faculty of the Royal

Vienna University with all the zeal of an ambitious student, equipped with an exceptional store of general preparatory knowledge acquired outside of the regular course of education, in which efforts his very intellectual mother had helpfully encouraged him.

Such attainments as a keen receptive analytical intellect, combined with a kind, winsome, self-reliant bearing, soon attracted the attention not only of his classmates, but also of his teachers, of whom the great chemist, Prof. E. Ludwig, invited him, though still an undergraduate, to join the staff of his famous laboratory. The earliest original publication of his, on a chemical subject of the benzol group, dates back to this early period. In 1881 he received his degree with highest honors, after which he immediately and with great vigor took up the studies of various accessory branches of medicine, besides doing service as interne in the General Hospital of Vienna.

On completing this service he went on a tour of study to various foreign universities. During this time he worked indefatigably with Prof. Neisser in Breslau, with Prof. Bergh in Copenhagen, with Prof. Lewin in Berlin, with Prof. Weigert in Würzburg, and with Prof. Besnier in Paris.

In 1883 he was called back to Vienna to become first assistant in Prof. Kaposi's clinic, a position very much coveted and held only by distinguished and promising men.

In 1884 he wrote his very much admired treatise on the syphilis bacillus, after which followed his publications of a new mercurial preparation, the hydrargyrum tannicum oxydulatum, which is still a valuable remedy and widely used; Victoria blau, a new stain for elastic tissue and nuclei; on electrolysis; on cocain in the treatment of skin and syphilitic diseases; on microorganisms of the normal urethra and in the urine of acute Bright's disease; and on granuloma fungoides. Of his publications in this country the treatises on psorospermiosis follicularis and on the relationship of scleroderma to syphilis are noteworthy.

In 1885 he was promoted to Privatdozent with the *Venia Legendi* and truly not a few of the present great dermatologists all over the world received some appreciable benefit from his able teaching during that time.

In 1888 he was offered the chair of Dermatology at the University of Constantinople and in the same year also that of Basel.

In the year 1889 he came to this city, where he very soon became one of the most honored members of the medical profession and of the highest reputation as a dermatologist. He held the position of Attending Dermatologist to Mount Sinai Hospital, of Consulting Dermatologist to the Montefiore Home and the Hebrew Orphan Asylum. He was a member of the New York Dermatological Society; of the American Dermatological Association; of the Academy of Medicine; of the New York County Medical Society; of the American Medical Association; of the Austrian and

German Dermatological Society, and of various other domestic and foreign medical organizations.

This worldwide reputation was not due to any one single feature in his life, or to any one great publication, but to the successes which his superior individuality achieved, to his unusually sympathetic personality; to his vast worldly and extensive general medical knowledge; to his superior diagnostic and clinical faculties, with a masterly hold in the special fields of dermatology and syphilology. It was further due to his absolute reliability and unbending love for the truth. One cannot, indeed, separate his sterling qualities of manhood from his superior professional attainments. He was admired and honored for his manly deeds, for his noble conception of life's aims and duties, for keen logical judgment, for his unlimited tolerance toward everybody and everything humane and human.

Dr. Lustgarten was an outspoken man of progress in all fields of science and medicine, yet he was not easily converted to any new theory. He persistently adhered to well-founded, tested methods, but in behalf of mankind deeply appreciated every valuable new step forward.

Though his life may be called a very successful one, and he has reaped some pleasure and satisfaction, as the fruit of his strenuous labor, from the universal respect and admiration of all those whom he helped, advised or befriended, nevertheless it pained and depressed him to see his physical strength give way at such an early age, while still retaining the fullest vigor of a powerful mind.

Dr. Lustgarten's untimely death is indeed a great loss to all who ever had the privilege of coming in personal contact with him; it is an irreparable calamity to those in particular who loved him; who were closer attached to him; who had cause to be grateful to him for favors received; for the help, advice, useful instructions and encouragement he always offered them.

A. B. B.



# THE JOURNAL OF CUTANEOUS DISEASES INCLUDING SYPHILIS

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# THE JOURNAL OF CUTANEOUS DISEASES

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COMMENTS ON THE ARTICLE "A COMPARATIVE  
STUDY OF ACRODERMATITIS CHRONICA ATRO-  
PHICANS AND DIFFUSE SCLERODERMA  
WITH ASSOCIATED MORPHŒA ATRO-  
PHICA" BY F. P. KANOKY AND  
R. L. SUTTON.

By PROF. K. HERXHEIMER and DR. WILLY SCHMIDT.

IN THE JOURNAL for December, 1909, J. P. Kanoky and R. L. Sutton published an article entitled "A Comparative Study of Acrodermatitis Chronica Atrophicans and Diffuse Scleroderma with Associated Morphœa," in which the following statement appears: "A careful consideration of the above facts can lead to but one conclusion—this patient, whose malady is clinically and in most respects microscopically identical with the disease described by Herxheimer and Hartmann as acrodermatitis chronica atrophicans, is suffering from an œdematous scleroderma of the circumscribed type, the patches being at this time in the atrophic stage." They add that while not in a position to express an opinion on the cases reported by Herxheimer and Hartmann, "the former's assertion that 'sclerodermic skin is as hard as a board' gives one the impression that the œdematous form of the disease was entirely ignored by them in formulating a diagnosis."

In this connection we wish to state that in acrodermatitis chronica atrophicans, as well as in scleroderma, we distinguish an erythematous, *i.e.*, œdematous stage. However, the termination of the two diseases, as the names indicate, is absolutely different. Herxheimer's observation referred to the terminal stage of scleroderma, in which the skin feels hard and board-like to the palpating finger. In all the cases described by him as acrodermatitis chronica atrophicans, some

of which were observed over a period of years, atrophy developed, the thinned, often wrinkled skin being easily picked up from the underlying tissue. We do not refer to those very rare cases in which the sclerodermic changes gradually pass on to atrophy (Ledermann). Recently, Oppenheim has called attention to three different clinical forms which represent the terminal stage of atrophic dermatitides (dermatitis chronica atrophicans; atrophia cutis idiopathica).

1 The formation in the upper cuticular layers, after degeneration of the connective tissue, of fat tissue, appearing clinically as small loose pouches which ordinarily only project but may be entirely everted.

2 The development of fibromata with simultaneous peripheral dilatation and tortuosity of the blood vessels, giving the clinical picture of firm, bluish-red, hemispherical nodes.

3 The development of sclerotic connective tissue with new formation of elastic tissue. Clinically the skin is white, rigid, and cannot be picked up between the fingers.

Case W. C., reported by Kanoky and Sutton may possibly be included under type 3 described by Oppenheim. If we may venture an opinion, it would appear that there is in this case a combination of dermatitis chronica atrophicans and scleroderma. Arndt, Arning, and Herxheimer have noted that such combinations are not altogether rare; and similar cases have been described by Brüning, Heuck, Hoffmann, Kingsbury, Nobl, Pick, Rusch, and others.

Oppenheim classifies some of these cases with the terminal stages of dermatitis chronica atrophicans; for instance, those of Brüning, Heuck, and Nobl, for which reason we have taken this possibility, as above stated, into consideration, especially as investigations regarding the termination of atrophic dermatitides are not as yet conclusively settled.

Histologically, Kanoky and Sutton found a thinning of the rete mucosum, a flattening out of the papillae, and, in places, a thickening of the horny layer. Similar observations were made in dermatitis chronica atrophicans by Arning, Rusch, Krzyształowicz, Brüning, Grouven, Heller, Kreissl, Herxheimer-Hartmann, and others. In scleroderma these findings are variable. The departure from normal is reported as a slight hyperkeratosis and thickening of the rete on the one hand, and on the other a thinning of the rete (Lagrange, Spieler) and flattening out of the pegs (Nothhafft) (Luithlen). In

Kanoky and Sutton's case the sections showed an infiltration of small cells scattered in irregular groups through the corium. This infiltration occurs in scleroderma as well as in acrodermatitis chronica atrophicans. In their case an important change was that of the connective tissue, namely, a collagenous degeneration. Beck, Herxheimer, Schmidt, Rusch, and others, found an analogous change in acrodermatitis chronica atrophicans, *i. e.*, dermatitis chronica atrophicans. In scleroderma, according to Luithlen, there is an hypertrophy of the collagenous bundles (Strassmann, Köhler), a hyalin degeneration (Nothhafft), and an apparent decrease of the connective tissue cells (Lewin-Heller).

Further, Kanoky and Sutton found in some of the coil glands a considerable apparent dilatation of the ducts, with atrophy and consequent thinning of the surrounding cellular wall, but the excretory canals were considerably lessened in diameter, especially in the upper layers of the skin. A similar finding is recorded in acrodermatitis chronica atrophicans, *i. e.*, dermatitis chronica atrophicans, by Herxheimer, Schmidt, Lehmann, Rusch, Neumann, and others. Like degenerative changes in the sweat glands in scleroderma are interpreted as "mechanical."

The sebaceous glands and hair follicles in Kanoky and Sutton's case showed partial atrophy. Similar appearances were found in acrodermatitis chronica atrophicans, *i. e.*, dermatitis chronica atrophicans, by Buchwald, Pospelow, Unna, Colombini, and others. In scleroderma few changes are described referable to the hair and sebaceous glands. Kanoky and Sutton found the arterial walls thinner than normal. Our examinations agree with those of others (Unna, Rusch, etc.), in demonstrating a vascular thickening. The changes of the vessels in scleroderma, as given by Luithlen, are a thickening of their walls (Letulli) caused by a hyperplasia of the media and intima almost entirely (Leredde and Thomas). Concerning the elastic fibres, Kanoky and Sutton mention "an irregular massing." We and other observers (Colombini, Huber, Bruhns, Rusch, Beck, Lehmann, etc.), were able to demonstrate degenerative changes in the elastic fibres, such as granulation, fragmentation, and thinning. Some observers found the elastic fibres in scleroderma increased (Wolters), others noted a decrease (Unna, Lewin-Heller, etc.). As a differential diagnostic point Ehrmann-Fick give the parallel arrangement of the collagenous and elastic fibres in acrodermatitis atrophicans, as opposed to those in scleroderma.



There exists a great diversity of opinion regarding the histological findings not only in dermatitis chronica atrophicans (Herxheimer-Schmidt) but in scleroderma (Luithlen, Mraček, Handbook of Skin Diseases, Vol. iii.). To quote Krzyształowicz, who investigated diffuse scleroderma, a comparison of the latter with the closely related process, atrophia cutis idiopathica diffusa, leads to no elucidation. In both the changes in the beginning affect the vessel walls and their surrounding tissue; both lead to the disappearance of the adipose and subcutaneous connective tissue, and merging of the latter with the cutis. Then the process diverges in that, in atrophia cutis the atrophy of the collagen and glands follows rapidly, leading to thinning of the skin with complete disappearance of the elastic tissue, while in scleroderma atrophy of the collagenous tissue progresses slowly with, however, the final sacrifice of these and the elastic fibres.

In conclusion, we would emphasize that the clinical picture of idiopathic atrophy and the atrophic stage of scleroderma may present many similarities (Rusch). We are, however, far from holding the opinion that acrodermatitis and scleroderma in the atrophic stage are identical, as maintained by Vignolo-Lutati.

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## HISTORICAL SKETCH OF LEPROSY IN THE UNITED STATES.\*

S. POLLITZER, M.D., New York.

IT is my agreeable task to offer as a prelude to the scientific papers of the evening a brief historical sketch of the introduction of leprosy and its prevalence to-day in the United States. It is impossible to treat of the history of the disease in this country without considering its prevalence in the old world countries whose inhabitants colonized these shores. The history of leprosy in Europe, however, has been written so well and is so familiar to all of us that I shall pass it over with only the briefest mention. Leprosy has existed in the Orient, the cradle of our civilization, from the earliest time. It was probably brought into Italy in the first century B. C. by the soldiers of Pompey. Thereafter it spread over Italy and following the Roman arms, gradually extended over the greater part of Europe, traveling from the East to the West and from the South to the North. The notion that the disease was carried into Western Europe by the Crusaders is without foundation, though no doubt these corybantic hordes traveling to and from the infected territory of the East helped to spread the disease. Among the crusaders themselves, leprosy was so common that leper-houses were established for them in the East and a special order of Knights of Lazarus was created whose members acted as nurses to the afflicted.

The disease existed, however, to a considerable extent in Western Europe long before the Crusades and in the sixth, seventh, and eighth centuries we find references to the disease in the laws of the Franks, the Longobards and the Popes. Isolation houses are men-

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tioned in France as far back as the time of Gregory of Tours (A. D. 560). In England the first leper-house was founded at Canterbury in 1084, more than ten years before the first Crusaders left that country. In Spain the first leper-house was founded by the Cid in 1067 at Valencia. In the succeeding centuries these institutions became very numerous all over Western Europe as leprosy increased in frequency and by the end of the thirteenth century there were about two thousand asylums in France and at least two hundred in Great Britain and Ireland. From that time on, the disease began to decline but at the time of the discovery of America, leprosy was still quite common in Europe, and while it was evidently on the wane it still existed to a considerable extent during the next two centuries—the period of the colonization of this country. In England numerous leproseries still flourished in the seventeenth century. There were, for instance, thirty-nine lepers in Bodmin Hospital in the time of James I., when Henry Hudson sailed up this bay and the Dutch were sending over the first settlers of Manhattan Island. In Scotland it prevailed a little longer; the last Shetland Island case died in the Edinburgh Infirmary in 1798. In Holland there were lepers in the leproseries throughout the seventeenth century, and as late as 1777 there was an official lepra-inspection—a mediæval custom—in Antwerp. In France the Belle Isle leproseries was still used as late as 1710. In Spain the disease was very prevalent during the sixteenth century, the period of the greatest colonizing activity of the country.

In view of the relative frequency of the disease in Western Europe during the period of discovery and colonization of this country, it seems remarkable that there is no record or other evidence of the occurrence of the disease in the early colonial period in the territory of the United States. It was not so in Mexico, the West Indies, and South America. In these countries the disease was early introduced by the Spanish, Portuguese, and French settlers. Very soon after the conquest of Mexico, Cortez found it necessary to establish a leper asylum in the City of Mexico. In South America the first authentic case is that of a governor of Bogota, who died of leprosy in 1648. It may be added that to-day Colombia is the most active leper-centre on this continent, one estimate of the number of lepers in that country placing the total at not less than thirty thousand cases. I may say in passing that the question of pre-Columbian leprosy in America has been effectually disposed of by Dr. Ashmead.

Another source of leprosy in America may be found in the impor-

tation of negro slaves from Africa. The traffic in negro slaves followed rapidly on the Spanish settlement of the country. The first cargo of slaves was landed from Portuguese ships in San Domingo in 1517; and negro slaves were introduced into Peru by Pizarro soon after the overthrow of the Inca Empire. Leprosy has long been known to exist among the negroes throughout Africa; but we have, of course, no means of estimating its prevalence in the past centuries. Most of the slaves brought to America came from the coast of Guinea and the Niger and Congo Hinterland. In these regions the disease is to-day extremely prevalent among the negroes, and Jonkin, in a report to the Berlin Lepra Conference in 1897 (p. 241), states his opinion that the Niger Basin is to-day, in point of numbers, the second most important lepra territory in the world.

The first historical reference to the presence of leprosy in the territory now included in the United States is found in a work by Captain Bernard Romans published in New York, in 1775, entitled a "Concise Natural History of East and West Florida." In giving an account of the diseases of the country, he writes (p. 249): "The chronic diseases are dropsies, consumptions . . . and among the blacks the leprosy, elephantiasis, and body yaws, which last in Carolina is called the lame distemper." And again (p. 257): "The leprosy so-called, whether the same as was the cause of proscription to the unhappy patients under the Mosaic laws i shall not pretend to determine; certain it is that it is a nauseous, loathsome, and infectious disease sometimes seen among the blacks. This appears first with the loss of beard and hair from the eyebrows, swelling of the lobes of the ears, the face begins to shine and brown protuberances appear thereon, the lips, and nose swell to a monstrous size, the fingers and toes will in the end drop off and the body becomes at last so ulcerated as to make the poor incurable patient really a miserable object of pity." This description of leprosy written by a layman, albeit a sea-captain and therefore in those days, necessarily something of a physician, is so excellent as to raise a doubt in my mind as to whether the Captain was writing of his own knowledge or transcribing what he had read of the disease. Be that as it may, leprosy seems to have made little, if any, headway in Florida during the succeeding years.

Certain it is, however, that at the time in question, the disease existed in Louisiana. At this time Louisiana was in possession of the French who had acquired the territory from Spain and it is probable

that the disease existed there from the Spanish régime. It is a matter of record that in 1786 the number of leprous beggars in the streets of New Orleans was so large as to compel the authorities to take action, and the patients were isolated in a house established for this purpose. This leper-house, the first in this country, was in use during a period of fifteen years, and during this time it sheltered a total of forty cases. Then during the Reign of Terror and the Napoleonic wars, the leper-house fell into neglect, and finally through death and the escape of patients the asylum passed out of existence shortly before the transfer of the territory from France to the United States. Thereafter no official action was taken in regard to the disease, but there are records of cases admitted to the Charity Hospital of New Orleans throughout the last century. Up to 1878 a total of eighty cases had been received at that hospital and an investigation at that time disclosed a total of thirty-seven cases in the city. In the past forty years there has been a notable increase in the number of cases in Louisiana and Dr. Dyer estimates the present number of lepers in the State as between three hundred and five hundred. As to the origin of the disease in Louisiana, there is an apocryphal story of its introduction by a colony of settlers from Nova Scotia. Dr. Dyer gives good reasons for questioning this story of its Acadian origin, and it seems far more plausible to ascribe the introduction of the disease to various sources, Spanish, West Indian, and African.

To pass for a moment to the North, there is no record of leprosy among the French pioneers or settlers in Canada in the early period, though, as we have seen, leprosy was fairly common in France at the time of Champlain and La Salle. But in 1815 the disease is known to have been introduced into New Brunswick by a woman of St. Malo in Normandy, who immigrated to Tracadie, a village on the Bay of Chaleurs, Gulf of St. Lawrence. Within a few years a number of cases occurred in her immediate family and among her neighbors and in 1844 a lazaretto was established for these cases. Up to the present time there has been a total of about one hundred and fifty cases of the disease in this settlement during a period of nearly a century, and there are to-day about twenty cases living in the asylum. In 1892 a small focus of leprosy was discovered on the Island of Cape Breton when eleven cases were disclosed among a few families living in close contact. In British Columbia a few cases were discovered among the Chinese in 1890, and since then there have been two or three cases among the whites.



Within the territory of the United States the next record of leprosy is found in South Carolina. Dr. Geddings, of Aiken, made a study of these cases in 1882 at the request of Dr. J. C. White for his study of leprosy in the United States. Dr. Geddings was able to collect seventeen cases occurring between the years 1847 and 1882, and his son, Dr. W. H. Geddings, in 1892, added four cases to this number. The patients were all natives, and came from every grade of society; five of the twenty-one were negroes. Through my friends, Drs. J. W. Dawson, and John Wilson, Jr., of Charleston, I am able to add a little to the history of leprosy in South Carolina. The records of the Health Office began in 1822, and the first death from leprosy was recorded in 1824, in a colored person. The case created no comment at the time and it is probable that the disease had existed for a considerable time before. In 1828 there was another death in a black; and there were deaths from leprosy in 1831 and 1840. The first recorded death among the whites occurred in 1848; and up to that year the official records show a total of five deaths. The forty years following this date are covered by Dr. Geddings' record of twenty-one cases of whom sixteen were white. The records of the Board of Health of Charleston show some fifteen cases in the city during the last ten years, of whom five are living at the present time.

In view of the fact that all the earlier cases occurred among the blacks it seems plausible to ascribe its origin to Africa or the West Indies.

Historically, the next focus of leprosy to be established in the United States is found in the Northwest. Leprosy has existed in Norway since the Middle Ages; an asylum for lepers was established in Bergen in 1276. In the succeeding centuries the number of cases increased enormously. In 1856 an official count showed 2,231 cases and from the subsequent record of deaths it is now known that the number of cases at that time was fully one thousand more. It was about that time—the middle of the last century—that great numbers of Scandinavian immigrants settled in this country, the major portion of them in Wisconsin, Minnesota, Iowa, and subsequently in the Dakotas. Among these immigrants to "New Scandinavia" it is definitely known that there were about one hundred and seventy lepers who had the disease when they left their native land or developed it soon after arrival in their western homes. Among their descendants there are to-day, it is estimated, about thirty cases living.

The Pacific Coast has within recent years received a large influx

of natives of the Far East and of the Pacific Islands. China has from time immemorial been the home of leprosy. The Chinese merchants and coolies have spread the disease throughout the islands of the Pacific—notably the Hawaiian Islands, and have carried it to our own shores. San Francisco is one of the most cosmopolitan ports in the world, and among its heterogeneous population are lepers from almost every country on the globe. As to the number of cases in California, the Public Health and Marine Hospital Service Report in 1902 recorded twenty-four living cases. Dr. Montgomery in 1907 reported the histories of thirty-three cases which he had personally observed since 1891. Of these one-half were Chinese, the rest Swedes, Mexicans, Finns, Scots, Germans, Americans, and white natives of Hawaii.

Within recent years the number of lepers in Texas has assumed notable proportions. In the Public Health and Marine Hospital Service Report for 1909 made by Dr. Brinckerhoff the number of “officially recognized” cases is given as twelve. Florida, too, has of late years shown a slight recrudescence of leprosy, the ready means of intercourse between Cuba and the Bahamas and Key West affording an opportunity for the introduction of the disease. The Public Health and Marine Hospital Service Report in 1902 noted twenty-four cases in the State, but one, probably exaggerated estimate, places the number of cases in Key West alone at one hundred.

We have now considered the various centres of endemic leprosy in this country. Three foci among the Gulf States—Texas, Louisiana, Florida; one on the Atlantic Coast—South Carolina; one in the Scandinavian Northwest; and one on the Pacific Coast. In addition to the cases found in these regions, cases of leprosy are encountered in every larger city in the country. In Boston, New York, Philadelphia, Chicago, St. Louis, etc., there may be found a greater or smaller number of cases among the recent immigrants or among the traveling and floating population. A large proportion of these “floating” cases in every city, occurs among the Chinese. In the East the Russians, Italians, South and Central Americans, and West Indians constitute the greater number. The total number of these cases in the present state of our laws can be only a matter of guess. In Dr. Brinckerhoff’s Report in 1909, the number of cases in the city of New York is given as four! Without any special effort we have gathered here to-night three times that number! Dr. Morrow who counts as the leading authority on this subject in our city told me recently

that he himself has seen in his practice and at various medical societies in this city about one hundred and fifty cases of the disease during the last thirty years. It is probably well within the truth to estimate the number of cases in this city at the present moment at about forty or fifty.

Everywhere, in attempting a statistical study of leprosy, we encounter the same difficulty, on the one hand official records that are ridiculous under-statements, and on the other hand unauthoritative estimates that are absurd exaggerations. The census in Norway in 1856 illustrates the inadequacy of official reports when a really careful inquest disclosed only two-thirds of the number of cases subsequently proven to have existed at the time. It has come to be recognized by leprologists as a safe rule to double the number of cases shown in official records. The reasons for this failure to obtain correct figures in the statistics of leprosy are manifest. In most of our States the authorities take no cognizance of the disease; it is not reportable. And when the disease is reportable so many cases are either not recognized or are secreted by their friends that only a small proportion come to be known officially.

The most careful attempt to arrive at a true estimate of the number of lepers in this country is that made by the Marine Hospital Service in 1902, and I reproduce here some of its results. They show a total of 278 cases in the United States, more than half of these in Louisiana. Of these 278, 176 were males, 102 females. 186 (two-thirds) were said to have contracted the disease in the United States. 145 (52 per cent.) were American born. The foreign born came from Norway, 22, China, 20, Germany 12, Bahamas 12, Iceland 11, Sweden 8, Ireland 6, Cuba 6, West Indies 4, England 3, France 3, Mexico 3, Italy 3, etc. In this report 155 cases are ascribed to Louisiana, 24 to California, 24 to Florida, 20 to Minnesota, 16 to North Dakota, 7 to New York, etc. If Dr. Dyer's estimate of 300 to 500 cases in Louisiana is nearer the truth than the official report of 155 cases in that State, and the estimate of 40 cases in New York, nearer than the 7 given in the report, and a like discrepancy occurs throughout the list, we may conclude that the official record of 278 cases is by far less than half the true number of cases in this country.

Dr. A. W. Hitt, ten years ago, in a careful review of the subject arrived at the conclusion that there were about 530 lepers in the United States. I should regard this as a conservative estimate.

## THE SOCIOLOGICAL ASPECTS OF LEPROSY AND THE QUESTION OF SEGREGATION.\*

By ISADORE DYER, PH.B., M.D., New Orleans.

Dean, and Professor of Diseases of the Skin, Medical Department, The Tulane University of Louisiana.

THE economic problem of the conservation of the human race has grown in importance with the development of civilization. The protection of the public against disease has existed along with the protection of society against other evils. Moses, in the regulation of his people, classed diseases in accordance with their relative importance in degrees of contagion. For over 5,000 years, the right of society to control disease has, therefore, been recognized and from time to time that right has more or less prevailed in some sort of enforcement. Institutions have arisen for all classes of the unfit. Criminals are placed in prisons; the aged and infirm are received in asylums; orphans are segregated, and those sick and maimed are hospitalized until they are either well or dead. With the recognition of infectious diseases, and with the knowledge of their disastrous effects, when allowed unrestricted spread, there has resulted a necessitous regulation under some sort of law compelling the isolation of all types of diseases, acutely epidemic in character.

While few communities have adequately provided institutions for the proper segregation of such diseases, all civilized communities recognize the need of provision and all communities more or less compel the elimination of the individual as a focus of infection and arrive at this by isolation. Governments everywhere have established international agreements by which certain diseases are barred from entrance, and the list of diseases amenable to such rules grows with the development of the knowledge of them. Compulsory segregation of acutely infectious diseases has incited the intelligent survey of other diseases parasite on the human race and which demand a tax upon the mortality. Special hospitals have arisen with provisions for the insane, and for those afflicted with diseases outside the commoner fields of practice. The importance of such diseases as cancer and tuberculosis has compelled particular hospital provision, in some places, under municipal or State auspices. With all diseases the

\* Read before the New York Academy of Medicine, Section on Dermatology, December 29, 1910.

public interest has grown with the wider dissemination of knowledge concerning them until to-day the public seems ready to respond to any demand for its protection and to-day, as in ancient times, the "health of the people is the first law."

Leprosy has always stood as the example of the most fearful of human afflictions. The Biblical estimate of the disease has created a popular horror which even down to modern times has placed the leper as a pariah and a person condemned by his State to abandonment. In all ages, his class has been recognized and the ancient walled cities of continental Europe housed these victims of Fate under the worst possible conditions. The leathern thong with the signal cry of "Unclean, Unclean," marked the leper among his people as one to be avoided and even the followers of the Christ strove to protect him from contact with the leper who besought his blessing.

While some estimate has been made of the occurrence of medieval leprosy, and the record of lazarets in continental Europe places these at some 12,000, it is not known where the confines of the disease might be placed for that period. It is known that until 1850 there was no serious recognition of the disease, and that with the exception of necessitous asylums in India, and other British Colonies, occasional lazarets in Japan and the leprosarium in Cuba, no care was taken of those sick with this disease. With the uncounted horde in China to-day, still condemned to wear the leathern thong and to ring a bell to indicate their presence, together with the tabulated cases in almost all countries of the world, it is more than likely that leprosy to-day is as prevalent as it ever was and that numerically it is no less.

All the countries of Europe have made provision for the lepers found. Even Russia has asylums, where thirty years ago these poor souls were treated like outcast dogs, if Miss Kate Marsden's Siberian tales may be accepted. India has systematic care of the lepers themselves as well as of their children. Japan, with her 20,000 lepers, has all of these segregated and in asylums under government care. Norway has reduced leprosy to a controllable condition by systematic methods of segregation, legislation, and registration. Since 1859 the Sandwich Islands have shown considerable interest in leprosy, although not until Father Damien's immolation in the '80's did any real care or treatment prevail. The Islands of Cuba, Porto Rico, Jamaica and the Danish West Indies, of the Mexican and Caribbean Seas, have provision for leprosy. Some South American countries have also made some provision, but this is not general. Mexico



has done nothing, not even in estimating the number of lepers in the country, known to have been there for over fifty years. The British Government has housed all known lepers at Tracadie, in New Brunswick, and at D'Arcy Island, in British Columbia. The United States Government has carried on most praiseworthy methods against leprosy in the Philippines and in Guam, with numerous hospitals to provide for over 3,000 known lepers.

In the United States, as yet nothing has been done by the Government beyond an abortive attempt at investigation undertaken in 1900. Individual States of the Union have taken notice of leprosy and some States have enacted legislation regarding the disease. Minnesota has made record of the imported Norwegian cases and at least one case has arisen from these. Iowa, Oregon, and California have laws which in California alone are enforced. At the lazaretto in San Francisco there have been from twenty-five to thirty cases for a number of years, the number being increased from time to time by freshly segregated cases and diminished by the usual deaths or absconders. No evidence of endemic leprosy has yet appeared in California. In New York a few indigent lepers were sent to North Brothers' Island a few years ago to satisfy sensational public opinion, but these lepers were allowed to escape from control without material hindrance. Massachusetts has a few lepers isolated and cared for near Boston, but no systematic legislation has been enacted, specifically directed at this disease.

Louisiana alone of all the States has regularly provided for the lepers in the State since 1894. As early as 1878, Board of Health investigation attracted attention to the prevalence of the disease and in the year 1890 legislation was first directed at leprosy. A few lepers were housed in the New Orleans Pesthouse until 1894 when a proper legislative act created a State Home under proper care and proper provisions. Over two hundred lepers have been admitted in sixteen years and at this date there are nearly seventy inmates.

Leprosy is known to be endemic in Louisiana where the disease has been recognized since 1778, and, may it be said, where the disease has been systematically studied since 1890. The neighboring States of Texas and Mississippi have numerous cases for which no provision whatsoever has been made and in Texas (Galveston notably) the disease has been in existence for over thirty years and it is known to have spread from the earlier cases to those now living in that State.

The existence of leprosy in other States has been reported from

time to time and it is fair to presume that fully fifty per cent. of the United States have one or more cases of the disease at this time. If new cases are arising each year in Louisiana, we may conclude that the same process is going on in other communities where there are enough cases to act as disseminators of a disease believed to be contagious.

Opinion regarding the segregation of leprosy has been well nigh unanimous excepting in the United States. Both the Berlin Conference in 1897 and the Bergen Conference in 1909 declared this as one of the conclusions of these conferences, arrived at by representatives from almost all centres of leprosy in the world. In the face of these resolutions, it is difficult to understand the attitude of the United States, as expressed in the refusal of the National Congress to entertain the consideration of a national asylum as proposed in the Raynor Bill and as expressed by the refusal of the Governor of the State of Texas to approve a bill passed by the Legislature authorizing the establishment of a leper home in Texas. I might, appropriately, also, refer to the report of a committee from the New York Academy of Medicine, submitted in October or November, 1897, declaring leprosy not contagious in New York.

There are some practical points, in the argument for the segregation of leprosy, aside from the historical precedent anciently and more recently established. These should be approached from two distinct aspects, that of the person afflicted with the disease and that of the community, meaning the immediate household of the leper and the public at large. No leper who appreciates his condition is willing to afflict his relations with the disease. He realizes more than anyone else the burden of the malady and his frame of mind is at all times introspective. He is always without hope and the horror of the possibilities in his case weighs constantly on his mind and makes of him a morose melancholic. He shuns the public, avoids the daylight, and strives to hide himself from the sight of all observers. He struggles on with the constant apprehension of an unknown Fate and carries the burden of centuries of horror directed at his condition. He would be willing to separate himself from his family and would seek an asylum if this step could be accomplished without the publicity which usually attaches to the recognition of his condition by health authorities. In his usual environment, he is unable morally and physically, as a rule, to conduct any sort of systematic care or treatment and by allowing him to remain with his people he is condemned

to the inevitable end, with the constant dread that at any time there may be one or more of his family afflicted with the disease. With the family there is never the supreme sympathy that another disease would engender; sympathy is discounted by the fear of an insidious disease, known to take years in developing its attack. The entire household is disorganized and even the most unselfish spend each succeeding day in estimating the danger and in anticipating it, with the result that the home of a leper throbs with an unknown dread and frets with a burden hard to bear.

From the point of view of the general public, leprosy must be classed among the contagious diseases, not as contagious as tuberculosis or syphilis, but still a menace of no mean importance, when it is considered that its spread is as constant as it is insidious and that its evidences are more horrible than most known diseases. For thousands of years it has spread, and in every country in which it has been introduced the trail of the leper leaves no signal to indicate where it may have left its fresh focus.

Isolation alone has successfully combated the disease in all times and the experiences of Hawaii and of Norway in the past fifty years have demonstrated this supremely.

Segregation means more than the simple separation of the leper from the healthy public. It means more peace of mind, under conditions of existence which make amelioration and even cure possible.

Within three months after admission to the Louisiana Leper Home, patients begin to improve, and this is true of all cases excepting those admitted in the terminal stages of the disease.

Leprosy may not be a menace in the United States just at this time, but with the increase in numbers of cases noted within the past few years, and with the constantly widening distribution of centres of the disease, it is only a question of time when the disease of leprosy will be a menace of no small proportions in this country.

There should be a national provision made for the disease, under such conditions as would offer an asylum to all lepers, with the hope of intelligent treatment so as to provide for the possibilities of cure. Not all cases of leprosy need be segregated. There are many lepers who have survived the disease and who have mutilations as evidences of this. Such trophic types carry no active signs of leprosy and these cases fail to afford any bacillary evidences. These cases should not be isolated as they are usually beyond either danger to others or relief for themselves. But whenever the active presence of the Han-

sen bacillus can be demonstrated, the person with leprosy should be isolated for the betterment of his own condition and for the protection of others. The very possibility of such occurrences as the scandalizing publicity in the Early case and in the criminal inhumanity in the West Virginia case of the Syrian, who died of chagrin and neglect, should argue supremely for segregation, but under humane provisions, regulated by intelligent administration. The personal liberty of the individual afflicted with leprosy is of small moment when the possibilities of his freedom in the household and in the community are considered, but this question need never arise if the leper himself is approached in the right way and if the right sort of an asylum is afforded him.

In Louisiana it has been found true that not one patient in fifty is forced to go to the Home; the most of them go voluntarily, when the advantages of the institution are argued. The possibilities of cure alone are sufficient to make the victim of this disease willing to live in a special institution for leprosy.

The effort of all persons interested should be aimed at urging Congress to make provision for a national asylum for leprosy, located where suitable care and treatment may be maintained and then there would be a demand for admission on the part of all those victims of leprosy who now conceal their disease and themselves in fear of an unknown attack upon them.

Some \$250,000 have been allowed for the experimentation with leprosy in the Sandwich Islands with its less than 500 cases; the same amount in this country would build and go far towards maintaining one suitable institution for the lepers in this country, probably twice the number now in the Sandwich Islands.

EXPERIMENTAL LEPROSY AND ITS BEARING ON  
SERUM THERAPY.\*

By CHARLES W. DUVAL, M.D., and F. B. GURD, M.D.

Department of Pathology, Tulane University, New Orleans.

IN the present paper we propose to give briefly, my studies upon the biology of and immunity against the bacillus of leprosy, with a consideration of the possibility of specific treatment and prophylaxis.

Since the cultivation of the bacillus lepræ in pure cultures outside of the animal body, which achievement as you know has only been accomplished within the last year,<sup>1,2</sup> considerable light has been gleaned upon the biology, especially with regard to pathogenicity and viability, properties little understood before the cultivation of the bacillus.

Soon after the cultivation of the specific organism the possibility of a serum therapy for the treatment of leprosy presented itself, and with this in view we set about to study the blood of lepers in the hope that something might accrue which would aid in subsequent work upon the artificial production of an immune serum. It was thought advisable to first determine whether in cases of human leprosy specific antibodies are present, and if so, to find out as far as possible their nature and mechanism of production.

The initial growth of the bacillus lepræ cultivated upon artificial medium is in all cases obtained with considerable difficulty unless special methods of cultivation are employed. Multiplication of the bacilli outside of the animal body takes place slowly and it is necessary to transfer large quantities of the infected tissue to the culture medium in order to insure growth, which at best is feeble and not visible macroscopically before several weeks. Again, transplantation of large numbers of bacilli from the tissues is necessary as not one-third of those planted will multiply. The bacilli in the initial cultures do not differ in size and shape from the old rods of the tissue and grow in dense clusters which are broken up with great difficulty. In some instances, multiplication may be accelerated by rubbing up the bits of transplanted tissue after the first week or ten days, which frequently is the occasion for prompt appearance of growth within another few

\*Read before the New York Academy of Medicine, Dec. 29, 1910.

1. CLEGG. *Philippine Jour. Sc.*, 1909.

2. DUVAL. *Jour. Exp. Med.*, 1910, xii.



days. This seems to stimulate certain lepra bacilli, perhaps the more saprophytic forms, to further development. However, once the culture has started and the bacilli accustomed to the new environment there is no difficulty experienced in increasing the rapidity of growth by frequent subculturing. In two of our older cultures the transfers now multiply with great rapidity and reach the maximum growth in five days.

Once the bacillus lepræ has started to grow rapidly special media such as tryptophane is not essential. The culture will now do well on any alkaline medium of human or rabbit blood agar and glycerinated serum agars.

Attempts have been made to cultivate the lepra bacilli from nasal secretions in the cases where great numbers of them are found in the serous discharge, and even though contaminated with other bacteria, growth has resulted in two out of five cases which we have attempted. It is much more difficult to obtain cultures of the organisms from nasal discharges than from the leprous nodule because in the latter, bits of tissue are unavoidably carried over in the transplants which serve as pabulum for the cultures until growth is well started. Commensal bacteria are a distinct advantage in the initial cultivation of the bacillus lepræ, while amœba are of no value at all; on the contrary, they are a detriment.

Leprosy bacilli when freshly isolated from the animal tissues are slightly curved and distinctly beaded, a feature that is common for all early cultures no matter on what medium they grow. However, in some of the older cultures, those many generations removed from the parent stem, the bacilli undergo a decided change in size, shape, and manner of arrangement. Not only is the growth more rapid, which naturally would be expected, but the arrangement of the bacilli is diplo-bacillary, the individual organisms in many respects resembling the young forms of bovine tubercle bacilli. The difference is so marked that on morphological appearance alone it is quite easy to say which cultures are of recent isolation and which are many generations removed from the animal body. This diplo-bacillary arrangement of egg-shaped rods is a characteristic feature for the older cultures. In the examination of stained microscopic preparations it is difficult to find single bacilli or clusters of more than two pair. If such a preparation is stained by any of the ordinary aniline dyes it would be hard indeed to distinguish the organism from the diplococcus lanceolatus.

Though this transformation indicates that a given bacillus lepræ culture is rapidly growing and has become accustomed to the saprophytic conditions, it is no criterion that the organism has lost in virulence. The cultures produce lesions in the animals as quickly as the bacilli of recent isolation. It is noteworthy in this connection that the organisms passed through the animal again become long, slender, "beaded" rods without a suggestion of pairing. Again, the recovery of the culture from the animal is accompanied with the same difficulty as previously, growing at first slowly and only upon special media.

The staining reaction of cultures with respect to acid-fastness remains unaltered, in fact they retain more tenaciously the carbol-fuchsin dye than those in the tissues, since they take the stain more intensely and resist for a longer period the decolorizing agents.

At the present writing we have succeeded in cultivating the bacillus lepræ from the cutaneous nodules in eight cases of leprosy, two cases of nasal discharge, and from the experimental lesion in a number of white and Japanese dancing mice and monkeys. That the cultures are leprosy bacilli, and not some other acid-fast species has been definitely proven by cultural and animal tests.

The experimental study upon the virulence and viability of leprosy bacilli shows the necessity of early diagnosis and the need of strict segregation of certain types of the disease. The length of time that the organism will live and retain its infectiousness outside the body indicates plainly the risk to a community in allowing leper patients at large, in particular, those who have open lesions. Especially dangerous from the standpoint of source of infection are the cases discharging the bacilli in the secretions of the nasal mucous membrane. These cases are a constant menace to those with whom they associate because of the possibility of indirect transmission of the bacilli that are unconsciously deposited upon articles about the household where the leper resides. The house once infected may remain so for years, and other families that subsequently move into the premises are in danger of contracting the disease. The results of animal experimentations demonstrate the fact that direct communication of the disease may take place from individual to individual without the aid of an intermediate host such as the bedbug or a parasite.

On two occasions, we have succeeded in infecting mice by rubbing cultures into the nares after gentle scarification of the mucous

membrane. These experiments support the view that the chief portal of entrance for the bacillus lepræ to the human body is by way of the nasopharynx. There is also evidence to show from animal experiments that the bacilli may gain entrance to the human body through breaks in the skin without giving rise to lesions at the entrance site.

The question of the viability of the bacillus lepræ outside of the animal body is of the greatest practical importance from the standpoint of sanitation and preventive medicine. In view of the fact that cultures will remain alive and virulent for months under the most unfavorable conditions would explain much heretofore not understood about the transmission of the disease.

The bacilli can be readily cultivated from bits of infected leprous tissue that have been kept in salt solution at room temperature for more than eight months. Again, they live and retain their virulence in culture associated with other bacteria for more than a year where precaution is taken to avoid against drying of the medium. Fresh growth also can be obtained from cultures which are a year old whether kept at 10°, 32°, or 37°C. Even in material overgrown with saprophytic bacteria the lepra bacilli remain viable for months and will multiply when transferred to a suitable medium. There is no evidence to show that the ordinary pyogenic or saprophytic bacteria interfere with the longevity of the bacillus lepræ. As already stated, these organisms are helpful in the isolation as they prepare the dissociated products of tryptic digestion, which are essential for the initial multiplication of the specific organism. Where the contaminator is a non-spore bearer it is an easy task to eliminate it from the culture by heating at 60°C., for one hour (Clegg). In order to obtain a pure growth from a culture contaminated with saprophytic spore-bearers, the mixture may be injected intraperitoneally into mice and the animal killed in ten days to two weeks, and from the peritoneum the acid-fast bacillus can be recovered in pure culture; or the mixture may be plated out.

The temperature conditions in which the bacillus will multiply have been found to range from 10° to 39°C., the optimum being about 32°C. In our experience cultures will withstand higher degrees of temperature and for a longer period of time than any of the better known acid-fast bacilli; growth resulting after heating the bacilli for 30 minutes at 70°C., or at 65°C., for one hour. Heating at these temperatures does not alter apparently the infectivity of the organism.

Whether the organism's resistance to high temperature is due to its fatty envelope as in the case of the tubercle bacillus, or due to spores, is still a mooted question. We do not doubt that the fatty substance in and about the organism protects it to a certain extent against moderate degrees of heat, but this in itself would not explain the resistance of some cultures. These higher resistant cultures show clear spaces and deeply staining bodies within the bacilli which in many respects are tinctorially and morphologically similar to ordinary bacterial spores. That certain cultures of the bacillus lepræ, more especially those containing these "clear spaces," resist higher temperatures than cultures that do not contain them has been repeatedly demonstrated. The true nature of these bodies is, however, still problematic and work is now in progress to determine whether or not the bacillus lepræ under certain conditions form spores.

The mere fact that the organism lives for so long a time outside of the animal body may explain why the disease continually reappears in households that have harbored a leper. The bacilli escaping from the infected individual, who for months may not be aware of his malady, are a constant menace to others of the household or to subsequent tenants, even though it be years after the direct source of infection has been removed. The animal experiments do not tend to support the view that leprosy may reside for years in the human body before manifesting any outward signs of the disease.

Direct inoculation from man to man may occur but it is the exception. On the other hand, in the light of our present knowledge, the evidence of indirect transmission is by far the more significant. We believe that the bacilli, living as they do for more than a year outside of the body, is the most likely condition that renders transmission of the disease possible. Our investigations also confirm the belief that the mucous membrane of the naso-pharynx is the port through which the bacilli gain entrance to the body, as well as the chief source from which infection spreads.

Heretofore attempts to infect or produce lesions in animals other than the Japanese dancing mouse have been unsuccessful; but of late we have succeeded in producing lesions in the white mouse, and typical leprosy in the monkey with cultures of the bacillus lepræ. The failure before to infect this species must be attributed to some error in technique, for it cannot be conceived that a cul-

ture would alter in this particular feature under conditions of artificial cultivation. One is led to infer, however, that the infectivity of some strains of the bacillus lepræ, at least, are not appreciably altered by a year's sojourn outside of the animal body. It may be stated that all cultures are not capable of infecting either dancing or white mice.

Thus far the experimental work would indicate that there is a considerable range of infectivity for bacillus lepræ cultures with respect to these animals, and the same is true for the bacilli used directly from the human tissues.

With regard to dancing mice, though lesions almost invariably develop after intraperitoneal injections of leprosy bacilli, none of the animals dies as a result, although some of them are now under observation for more than eight months. However, the mice that have been sacrificed present small macroscopic lesions in various organs of the body. In some instances the mice killed five months afterward have shown no demonstrable lesions; presumably in these animals the bacilli were destroyed and the lesions in consequence healed. This assumption is based on the fact that all dancing mice killed four to ten weeks after inoculation have shown small, well-defined leprous lesions. Attempts to infect rats, rabbits, and guinea pigs have so far given negative results.

The experimental lesion of leprosy is histologically identical with that in the human tissue. Although to the naked eye they appear as tubercles they are more minute and circumscribed than the lesions of tuberculosis and do not caseate. It cannot be said, however, that they are indistinguishable from early miliary tubercles, but one accustomed to seeing the experimental leprous tubercle has very little trouble in recognizing even macroscopic differences, while on microscopic examination any previously existing doubt is at once dispelled.

Following the cultivation of the organism our attention was naturally drawn to the possibility of producing an active artificial immunity which might be made use of in the treatment of the disease. In this respect our efforts have been directed along two distinct lines: first, patients suffering from the disease were inoculated with suspensions containing leprosy bacilli and their toxins; and, second, animals have been inoculated with larger doses of the bacilli in the hope of producing in their sera immune bodies which might be used in the passive immunization of human cases. In addition, an



effort has been made to identify the presence of such bodies in the blood from patients suffering from the disease. By means of these qualitative and quantitative tests it was hoped that some circumstantial evidence, at least, might be adduced which would suggest the probable outcome in serum or vaccine therapy.

In the first examination four bodies were looked for, namely,—specific amboceptors, agglutinins and opsonins against the leprosy bacillus in patients suffering from the disease in its different stages and types. We have determined that the complement content does not differ from that in normal individuals to any demonstrable extent, nor does the stage or type of the disease produce any alteration in the quantity of complement present.

Since complement is present in leprosy patients in normal quantities it will probably be of the utmost importance in the treatment of the disease by serum therapy, if it is found possible to produce a serum in animals which will contain a higher amboceptor content against the bacillus lepræ.

In the examination of blood from patients suffering from leprosy the serum has been shown to contain specific antibodies of different kinds against certain constituents of the bacillus lepræ. The opsonic content is probably affected at different stages of the disease, but with reference to the activity of this body our researches have so far not proved conclusive.

Specific amboceptors are undoubtedly present in comparatively large quantities. In confirmation of the results of others we have found that not only are specific bodies present in the blood of leprosy cases, binding complement with leprosy bacilli, but also substances fixing this body in the presence of phosphatids prepared by the extraction of human heart muscle. Not only has this phenomenon been constantly present, but it has been demonstrated that the complement binding power is as great in the presence of the lipoids as in the presence of the bacilli themselves. Thus sera fixing 9 units of complement when treated with a suspension of bacillus lepræ are likewise found to be capable of fixing a similar quantity when the lecithin antigen is employed; in the same way cases fixing 2 units with one antigen have fixed 2 units with the other. That the reaction is quantitatively as well as qualitatively specific is shown by the fact that with few exceptions, even the delicate reaction depending upon the fixation of only one complement unit has been equal with both materials as antigen.

On the other hand we have been unsuccessful in demonstrating the presence in leprous sera of specific amboceptors other than those combining with the lipid bodies. Again, we have found that not only is the complement binding power in the presence of the two antigens a characteristic of leprous cases, but is also found in the serum from luetic individuals.

Apparently, then, the constituent of the leprosy bacillus against which the most active antibody is produced is the lipid material.

Furthermore we have been successful in extracting from the bacilli by means of ether and alcohol, fatty substances in comparatively large quantities, the greater portion of which is insoluble in acetone. This acetone insoluble content has been analyzed and found to contain phosphorus, proving that it belongs to the phosphatid group of fats. Since chemically the fatty material in the bacilli is closely related to the lecithins as extracted from the human heart, and the amboceptor content of the serum of both leprous and luetic cases is quantitatively as well as qualitatively the same whether the artificially prepared lipoids or the bacilli themselves are used, we consider that it is justifiable to assume that these two lipoids can differ but slightly from one another. Further, in view of the fact that the serum of leprous individuals contains chiefly antibodies against the fatty content of the bacillus, and since specific immune bodies are usually produced in a manner which is most useful to the host, we think it reasonable to infer that it is the fatty constituent of the bacillus which affords its greatest protection against the action of the resistant forces of the host.

The idea that the fatty material in the bodies of both tubercle and leprosy bacilli is a powerful protection against the body fluids and cells is by no means new. In fact, in the treatment of leprosy, both tuberculin and nastin have been employed in the hope of increasing the forces of the individual against this protective covering of the bacillus. The absence of satisfactory results following the employment of both these materials can be explained in two ways. First, the fatty constituents of both these preparations differ to a greater extent from that present in the leprosy bacillus than do the phosphatids prepared from cardiac muscle; and secondly, along with the fatty material injected, a larger or smaller quantity of toxic bodies other than the lipoids is inoculated, rendering the use of large doses impossible.

We have been sufficiently impressed by the apparent impotency of the specific bodies against the phosphatid fat in the immunization against the bacillus lepræ to have undertaken animal experimentation in the hope of preparing a serum of sufficient anti-lipoid potency to be of service in the passive immunization of human cases. Leprous patients are also being subjected to injections of emulsions of the fats to determine the possibility of the production of a more marked active immunity than that produced normally by these cases.

Although we consider that the work suggests the prime importance of this phase of the immunity leading to the destruction of the bacillus, we believe that this method may probably be supplemented by the production of either a passive or active immunity against the toxines and protein constituents of the bacillus. We have proved the presence of insoluble toxines against which it is my aim to develop specific bodies, if the greatest advantage in the treatment of the disease is to be achieved. To this end we are continuing the vaccine treatment of cases and proceeding with the attempt to produce an active immunity in animals.

#### DISCUSSION.

DR. BRINCKERHOFF said that he was so entirely in accord with the views of Dr. Dyer on the control of leprosy by segregation, that he felt some diffidence in rising to discuss the paper.

That leprosy was a communicable disease must be considered an established fact. This being the case, attention was, of course, directed to the control of the disease. The history of preventive medicine taught that effective scientific control of a communicable disease was conditioned by knowledge of its mechanism of transmission. In the case of leprosy we had no definite knowledge upon this vital point, and, therefore, must have recourse to rather crude methods. It was obvious that when one was dealing with a communicable disease whose manner of spreading was unknown, the only safe procedure was to adopt some method which would break up any possible mechanism of transmission. The segregation of the infected individuals was a method of this sort, for the absolute cutting off of all modes of communication between the infected individual and the community must disrupt any channel of infectivity. In other words, if we interposed sufficient space between the sick and the well, and saw to it that this space was not bridged in any way, the mechanism for the perpetuation of the parasitic species which caused the disease, must necessarily break down.

If we were to turn from preventive medicine in man, where humanitarianism must play some part, and were to consider the control in animals of communicable disease of unknown modes of transmission, we would find that a similar rule of action had been adopted. Among those who have to deal with foot and mouth disease in cattle, or epizootics among fowls, it was well known that the immediate slaughter of the infected animals was the surest way of controlling the epidemic.

Logically considered, the segregation of infected human beings during the

course of a communicable disease was only a humane variant of the procedure adopted in controlling communicable disease in animals. The question whether such radical measures were justifiable in the case of leprosy, the speaker said he would leave for others to discuss. As for himself, he felt that inasmuch as leprosy carried with it a heavy social penalty, and was the supreme disease horror of humanity, the rights of the infected individual were not to be considered where they came in opposition to the rights of the community. He considered that the adoption of the most radical measures which our humanitarianism would permit to prevent the infection of individuals in the community was, in the case of leprosy, not only justifiable, but was obligatory upon the health authorities.

DR. CHARLES J. WHITE, speaking of leprosy in the State of Massachusetts, said that his father, Dr. James C. White, had observed, before the records of the State Board of Health had taken cognizance of leprosy, five cases of the disease. 1st. A man from Trecadie, seen in 1856; 2nd. a sailor on a Molokai steamer, who afterward disappeared on a homeward voyage; 3rd. a boy from Central America; 4th. a negro from the West Indies; 5th. a man from Medford, Mass.

The first example of leprosy recorded by the State Board was in 1875, and it occurred in a man of unknown nativity. The second in a Cuban man. The third in a native of Salem, Mass., who had visited the Sandwich Islands. The fourth in a negro sailor from Baltimore. The fifth in a colored man from the Cape de Verde Islands. The sixth in a Chinaman. The seventh in a sailor from the Cape de Verde Islands. The eighth in a Chinaman. The ninth in a woman from the Cape de Verde Islands. The tenth in a man from New Orleans. The eleventh in a man from Trinidad. The twelfth and fourteenth in Russian Jewesses. The thirteenth and seventeenth in Russian Jews. The fifteenth in a woman from the Azores. The sixteenth in a man from Barbadoes. The eighteenth in a man from Greece. The nineteenth in a woman from the Cape de Verde Islands and the twentieth in a man from Syria.

With this rather alarming influx of foreign lepers, all but four of whom had been discovered since 1903, the Massachusetts health authorities decided that it would be wise to bring them together under State control, and in 1904 and 1905 enacted laws authorizing the State Board of Charity to remove any person infected with a disease dangerous to public health to any hospital provided for State paupers (Acts of 1904, Chapter 395), and further authorizing the State Board to erect and maintain a hospital for the custody, care and treatment of persons afflicted with leprosy (Acts of 1905, Chapter 471).

Following the passage of this Act the State Board of Charities acquired the use of the Island of Penikese, off the southern coast of Massachusetts not far from New Bedford and erected its leper hospital.

The buildings, six in number, were one story high and consisted of two bed rooms, a sitting room, kitchen, pantry and bath room, with running water, toilet and bath.

It was decided two years ago, in view of the increasing numbers and in the interests of economy and better discipline, to erect a congregate building connecting each of the cottages with this main building and a congregate dining room. This building was now completed and would be ready for occupancy in the early Spring and would afford accommodation for at least twenty additional patients.

DR. SCHAMBERG said that in the State of Pennsylvania, leprosy was included by Statutory Act in the list of contagious and reportable diseases. It had been the invariable custom of the Philadelphia Bureau of Health to segregate all cases of leprosy found in the city. Within the past decade, the speaker could not recall more than seven or eight cases of leprosy that had appeared in Philadelphia.

One case was of particular interest inasmuch as the patient, a woman over sixty years of age with nodular leprosy, had never been beyond the confines of the city.

The speaker said he was in complete accord with those who favored national control, segregation and care of lepers, and for the following reasons:

(1). The lack of uniformity in the health regulations of neighboring States, such for instance as New York and Pennsylvania, where the leper was allowed complete freedom of action in one commonwealth and subjected to deprivation of liberty in another. This favored migration from the native State to another and often imposed on the latter the burden of support of an alien. This condition of affairs had prompted health authorities on occasions to refuse refuge to lepers and had led to most cruel and inhumane treatment as in a case which came under the speaker's observation.

(2). The absence of leprosy in many States did not warrant the maintenance of quarters for lepers. Most of the States were therefore without facilities for receiving such cases.

(3). It would be far more economical for the Federal Government to care for lepers in one or several institutions than for the various States to do so. The leprosy could be located in salubrious climates and could cover a sufficient area to permit a large degree of freedom to the unfortunates whom they sheltered. Healthful occupations, including farming, could be provided and all possible provisions made for the medical treatment, comfort and amusement of the inmates. When innocent individuals were deprived of their liberty for the common good, the government owed to them a generous reparation.

The speaker did not believe that it was necessary to segregate all lepers: much would depend on the type of the disease and the stage, and the ability of the patient to protect others. Expert commissions could pass upon the merits of each case.

Leprosy was but a feebly contagious affection, but experience proved that the disease spread where segregation was not practiced, and that it decreased where this measure was enforced. Leprosy was slowly gaining ground in the United States.

Dr. PUSEY said that Dr. Pollitzer had asked him to say something upon the policy to be pursued in this country in regard to leprosy, but Dr. Dyer had discussed this subject and his position was so sane and so humane that the speaker felt there was nothing in addition to say. There was one point, however, in regard to leprosy in this country that had not been emphasized and that was the relative harmlessness of a leper in a highly civilized community of the north temperate zone. Leprosy might be said roughly to be endemic throughout the world, except the most prosperous parts of Europe and of North America. In the Middle Ages it was endemic over Europe; with the advancement of civilization and in living conditions of the masses it had disappeared. And in the United States, outside of the subtropical district, it had not an endemic foothold. Experience, in short, showed that its infectivity under good conditions of living in a temperate zone was so slight that the disease did not hold its place. In warm climates, even under proper hygienic conditions, it spread and was a dangerous disease. In the North it was far different. An occasional sporadic case of leprosy was seen by all of us. In New York, which received a million immigrants a year, most of them from leprous countries, it was not surprising that enough cases should be filtered out from the horde of squalid people passing through yearly to allow an exhibition of a score of cases at a special meeting of this kind. But no case was known to have originated in New York and so it was in all the great cities of Northern Europe and America. No indigenous case was known in London according to Jonathan Hutchinson, none in Paris according to Halla-



peau, and Dr. Pusey knew of none in Chicago or other Northern city of the United States. In Hamburg, London, Paris, and New York, leprosy was not segregated in the hospitals and that was the best evidence of the lack of practical danger of contagion in the opinion of experts. A leper in the northern part of the United States was, of course, potentially dangerous, just as every live coal was a potential cause of a conflagration, but a leper with us had the potential danger of a live coal thrown into a sandpit.

The speaker was of the opinion that in every general discussion on leprosy we should not fail at least to bring out this fact; for the attitude of the public upon the discovery of a leper was usually a disgrace to its intelligence and its humanity. The treatment, for example, that the poor Syrian leper received a few years ago, shunted about in a freight car from one State to another and finally allowed to die from starvation and neglect, unattended and alone, when he might have been cared for without risk to anybody at any poor-house farm—to speak of the treatment of that poor wretch as mediæval was an insult to even the low civilization of the Middle Ages.

Dr. MORROW referred to the indications, which would point to the progressive increase in the number of lepers in this city. He, personally, had seen perhaps 150 cases within the past ten years. The constantly increasing number of cases, which were exhibited at the meetings of the New York Dermatological Society, was another evidence of the foothold the disease was gaining in this city. This might well be alarming, were it not for the fact that the cases seen here were for the most part imported and did not seem to spread by contact with others. He had, however, reported at least three cases of indigenous origin. None of the patients had ever been outside this country. The feeble contagiousness of the disease in New York was in marked contrast with its pronounced contagious activity in Louisiana and other leprosy districts. He had been much interested in the bacteriological researches of Dr. Duval and especially the frequency with which he found the first evidences of the bacilli in the nasal cavities.

The precise port of entry of the leprosy bacillus had long been a mooted point. The speaker had, in 1890, announced the theory that: "In the vast majority of cases, the vehicles of the virus through which contagion was effected were the secretions of the nose and mouth and that the port of entry as the mucous membrane of the respiratory and intestinal tracts with secondary infection through the blood or lymphatics and that, in the mucous surface of the upper air passages there might be an initial patch, which served as an incubatory medium for the bacilli before they had become more generally diffused throughout the system."

This theory was based upon his clinical studies of the disease and was afterward confirmed by the bacteriological investigations of Stickler, Jeanselme and Laurens, submitted to the Berlin Leprosy Congress in 1897. Dr. Heiser, in charge of the leprosy settlement in the Philippines, stated that he had been enabled to demonstrate in almost every case the presence of what he termed the initial lesion in the nasal cavities or a slight cicatricial depression, which marked its previous existence.

Another mooted point was the possibility of the cure of leprosy. He believed thoroughly that leprosy was curable by change of climate, good hygienic surroundings and proper treatment. He had had at least one case in which a cure had been definitely assured by the disappearance of all symptoms and a complete exemption from a return during a period of at least ten years. The history of the leper settlement at Molokai showed a large number of patients in which there had been a spontaneous arrest of the disease. He had had photographs of

certain patients made during his visit to the leper settlement in 1889 and some of those patients were still living with no evidence of a return of the disease.

DR. GEORGE HENRY FOX said that lack of time would permit him only to express his agreement with those who believed that leprosy spread in certain regions under conditions which we did not thoroughly understand and that in other regions it showed no tendency whatever to increase. Since the presence of imported lepers in New York City during the past generation or more had not proved to be a menace to the community in the slightest degree, the speaker failed to see any foundation for fear as to what might happen in the future. A leper had some rights which even a health officer was bound to respect and Dr. Fox said he would take this opportunity of commending the Health Department of the City of New York for the stand which it had heretofore taken in refusing to treat lepers in the absurd, unnecessary and inhuman manner in which they had been treated elsewhere.

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### WIDE-SPREAD LUPUS ERYTHEMATOSUS WITH ASSOCIATED PAPULO-NECROTIC TUBERCULIDE (?).

By UDO J. WILE, M.D., New York.

THE coincidence in a large number of cases, of lupus erythematosus in those suffering with tuberculosis in some form, was noted by the very earliest observers of the disease. The figures on this subject are presented in the excellent critical review of the whole subject of lupus erythematosus by Jadassohn<sup>1</sup> in Mraček's Handbook. The above fact, and the occasional occurrence of this disease with the so-called tuberculides, together with recent histological studies to be mentioned later, has led many authors to group lupus erythematosus among the tuberculide or paratuberculous affections.

Among the first to notice the occurrence of a tuberculide in lupus erythematosus was Jonathan Hutchinson as early as 1879. His observation at that time was that of a papulo-necrotic tuberculide, occurring in a patient suffering with lupus erythematosus. Additional cases of this kind have been reported by Hallopeau, du Castel, Balzer and Monsseaux, and recently by Brocq and Laubry,<sup>2</sup> and by Boeck.<sup>3</sup> The last named author is one of the most ardent supporters of the paratuberculous nature of lupus erythematosus, and in his paper presented before the International Dermatological Congress in Paris in 1900, he cited three cases of the occurrence of true tuberculides with lupus erythematosus. Darier<sup>4</sup> also supports this view and in his book "Précis de Dermatologie" recently published, he says, "—there are serious reasons for believing lupus erythematosus to be an erythemato-atrophic tuberculide—" Darier's micro-

scopic studies, moreover, lead him to believe that a differential diagnosis on pathological grounds, between lupus erythematosus and the tuberculides is at times very difficult. Among others who lean to the views advanced by Boeck and Darier may be mentioned Hallopeau, Leredde, Besnier, and Hutchinson. Against these views, however, we find arrayed the opinions of Neisser, Jadassohn, and Audry. Jadassohn, writing in Mraček's Handbook, on this subject, takes the same stand that Darier does as to the difficulty of differentiating lupus erythematosus and the papulo-necrotic tuberculides when they occur together, but he uses this fact as evidence against the theory of their identity. He says, for example, of Boeck's cases of the coincidence of the two lesions, why not consider both one and the same process and call that process lupus erythematosus?

In America, the association of the two diseases has been commented on by several writers. In 1899 Fordyce<sup>5</sup> in presenting a case of lupus erythematosus in a tuberculous subject, remarks on the frequency of this association, and his histological studies suggested to him "that in some cases the changes in the blood vessels and connective tissue may be due to the irritant action of certain soluble products of the germ" (tubercle bacillus). Holder<sup>6</sup> in a histological study of lupus erythematosus published in 1897, also found changes suggesting a pathological relationship between the two processes.

The whole question remains at present unsolved, and each case which might seem to have any bearing on the subject should be carefully studied. The case herein described is one of papulo-necrotic tuberculide occurring in a patient affected with lupus erythematosus, and is therefore worthy of report.

The patient, referred to me by Dr. M. G. Wasch, presented herself at the Beth Israel Hospital Dispensary on November 1, 1909. Her history is as follows:

FAMILY HISTORY, negative.

PAST HISTORY. The patient was always healthy as a child and as a young woman. She was married when twenty-one years of age and her husband is living and well. She has had six children, four of whom are living; two show unmistakable stigmata of inherited syphilis. One child died at the age of four months, and the patient miscarried once in the seventh month of pregnancy. She insists that she has never had cough, expectoration, night sweats or any symptom pointing to a tuberculous process. The skin disease for which

she presented herself, began five years ago with itching in the left ear, followed soon after by a scaly, pruritic eruption, which rapidly spread to the scalp and caused the hair to fall out. At this time she had treatment, but she continued to lose her hair until the entire scalp was denuded, four years after the eruption had first appeared. In the meantime, however, *c. g.*, three years ago, the disease had appeared on the face, beginning on the left cheek and spreading gradually over the nose and onto the right cheek. The eruption has been attended with itching at all times. Three months ago an eruption appeared on the extensor surfaces of both forearms, attended with absolutely no subjective symptoms, and at the same time the patient noticed scaling, itching, and pain on the flexor surfaces of her fingers.

PHYSICAL EXAMINATION revealed a typical wide-spread lupus erythematosus of the face and head. The scalp has been almost entirely denuded of hair; here and there are small scaling active patches of the disease, but for the most part the scalp is transformed into a superficial depigmented scar tissue. On each cheek and on the bridge of the nose is seen a pink, depigmented scar about the size of a ten-cent piece, these having followed, according to the patient's statement, the application of a strong salve. The lesions on the face and ears still show signs of an active process.

On the extensor surfaces of both forearms, extending from the wrist to the elbow, are numerous rice-grain, up to split-pea-sized nodules, some lying rather deep in the skin and causing only slight elevations of the surface, others more superficial and projecting a few millimetres outward. The lesions are firm to the touch, painless and without signs of inflammatory reaction around them. The patient states that they have never ulcerated, but a few of the larger lesions are umbilicated, and are covered with a tightly adherent crust, showing evident signs of recent necrosis. A tentative diagnosis of lupus erythematosus and papulo-necrotic tuberculide was made, and as a matter of interest a biopsy and a von Pirquet tuberculin reaction were decided upon. On December 11th, the cutaneous test was made and within twenty-four hours a definite positive reaction was noted. The inflammatory wheal resulting from this persisted for about two weeks, but was not attended by any general symptoms and only by slight local tenderness. The biopsy was performed on Nov. 15, 1909. Under local anæsthesia, one of the larger nodules, together with a strip of outlying normal skin was excised,

and after hardening was embedded in celloidin and sections were cut for examination, and stained with Unna's polychrome blue, Van Gieson, orcein, polychrome methylene blue, and eosin-hæmatoxylin. The histological picture presented was as follows:

The epithelium in places shows marked thinning and atrophy, in others a definite acanthosis. Corresponding to the atrophic epithelium, the subjacent papillæ are obliterated, and the horny layer above is markedly hyperkeratotic. At the follicular orifices, the rete mucosum is markedly thinned, and the distinctly dilated orifice itself, is completely filled out by a large horny plug showing hyalin degeneration of its cellular elements. The basal cell layer of the epidermis is heavily pigmented, and there is much pigment lying free in the papillary layer of the cutis. There is no œdema of the papillary lymph vessels and no dilatation of the blood vessels. The cutis itself shows a picture which varies according to the level at which the section is cut. At the periphery of the nodule, the papillary layer, particularly where the papillary processes are obliterated, is the seat of a rather dense infiltration composed principally of small round cells, with only a few plasma cells. As one approaches the centre of the nodule, this infiltration is replaced by a dense scar tissue, which occupies the greater part of the corium, extending up almost to the epithelium. The epithelium overlying this scar tissue is quite normal, the necrosis, scarring, and consequent atrophy seem to have involved only the cutis. The effect of this scarring, however, was noticed clinically in the excised nodule, which presented a definite umbilication in its centre. The deeper layers of the cutis show a distinct infiltration localized around the sweat coils, and to a lesser extent around the follicles, composed, however, almost entirely of plasma cells. There is no perivascular infiltration to be seen.

To sum up then, we have in a patient afflicted for five years with lupus erythematosus, the outbreak of an eruption limited to the forearms, which clinically resembles a papulo-necrotic tuberculide. Microscopically, the lesion shows epithelial changes consisting of hyperkeratosis and atrophy, follicular plugs, and changes in the corium consisting of small round cell infiltration, necrosis, and scarring of the papillary and subpapillary layers, and plasma cell infiltration around the sweat coils and hair follicles in the deeper parts of the cutis.

It is extremely difficult to deduce anything definite from these findings. The epidermal changes certainly suggest that the affec-



tion is lupus erythematosus; the changes in the cutis, however, do not conform to the changes described for this disease, in fact they are similar to the changes described by Unna, Pollitzer, Giovannini, Fordyce, Dubreuilh and others, for the tuberculide affections. To accept, in this case, Jadassohn's explanation of Boeck's case, and regard the entire process as lupus erythematosus is surely not consistent with the entire microscopical findings; at the same time, the latter cast a shadow of doubt on the clinical diagnosis of tuberculide. Such are the cases then, which have given rise to the original discussion; that they, and in this case in particular, may be true tuberculides modified in their histological pictures, by the presence of lupus erythematosus; that is to say, that they may be combination pictures of both diseases, seems to the writer to be a supposition worthy of careful consideration and further study.

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SOCIETY TRANSACTIONS.

## NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, November 22, 1910.

WILLIAM B. TRIMBLE, M.D., *President*.

Darier's Disease. Presented by DR. ROBINSON.

Dr. Robinson said that this was one of Dr. D. Orleman Robinson's cases, who had kindly consented to its presentation. The patient was a girl of fourteen, and the eruption was said to have commenced when she was two months old, appearing first on the backs of the hands. When presented, the lesions were on the scalp, face, neck, chest, sternum, axillæ, and arms, the extensor surfaces being especially affected. The nails were affected, but the palms were free. The condition was much worse in summer than in winter. The mucous membranes were free. There were two other girls in the family, ten and sixteen years of age, and a boy of three, besides the father and mother, none of whom had had

a similar condition. This girl had at times been treated at the Roosevelt and Vanderbilt Clinics, but probably for the first few months the diagnosis was not made. The condition now was not so marked as it was two years earlier. The diagnosis should have been made sooner. Finally some of the crusts and scales were scraped off and ground and stained, but the typical so-called psorosperm was not found. Not being inclined to consider it an ichthyosis, a section was made and it proved to be a well-marked case of Darier's disease.

DR. GEORGE HENRY FOX said he was inclined to think that perhaps these cases of Darier's disease were not so rare as was thought, and that they might frequently go unrecognized.

#### **Extensive Lichen Planus.** Presented by DR. TRIMBLE.

The patient was a woman, aged fifty-five, married, with practically a universal eruption. There were a very few small healthy spots on the leg, otherwise the whole body was covered with the small, flat, glistening papules characteristic of the disease. The main point of interest was the wide extent of the lesions. Dr. Trimble said he had never before seen such an extensive case of the disease.

DR. ROBINSON said that he would like to relate an instance which Dr. Fordyce would also probably remember—a case of psoriasis, the worst he had ever seen. After treating the man for six or eight months the psoriasis got nearly well, and then he developed a case of lichen planus in addition to the other disease. The condition was quite general, almost like the one presented by Dr. Trimble. In two weeks' time it disappeared entirely. A week later another case appeared with a lichen planus in the same location where he had had a psoriasis. These were the only two such cases he had seen in thirty years.

DR. SHERWELL recalled a similar case of lichen planus which was shown before the Society many years ago by himself. The patient was a nurse about forty years of age. He treated her with a limited good effect. She had some means, and she planned to visit the old country. On his advice she was to go to see Crocker for study and treatment. She took an ordinary slow boat and was some twelve or fourteen days on the voyage, and was very seasick most of the time, taking little or no nourishment during the entire trip. When she went to Crocker she was a cured woman. The simple change of climate and hygienic conditions effected the cure. Some of these conditions would disappear where a change of any kind occurred—either for the better or for the worse, as it seemed in her case. It was one of the most marked cases of lichen planus he had ever seen. The lesions were very distinct and were all over the arms, back, and lower limbs.

DR. BULKLEY said that he had had a case not very long ago of very extensive lichen planus, and—bearing out what Dr. Sherwell had said about change of diet, climate, and hygiene—the condition was relieved in four or five days on a diet of rice, bread, butter, and water. The itching ceased and the other symptoms improved greatly. A change of diet would often make a great improvement in lichen planus.

DR. KLOTZ said that he had seen several of these generalized cases disappear very rapidly in two or three weeks apparently not on account of the

treatment they received, but spontaneously. He inquired how long the condition had existed in this patient and pointed to the absence of redness of the lesions and of scratch marks.

Dr. TRIMBLE replied that he understood the condition had lasted for three months. He had been treating the case for six weeks, and at first his treatment had made no impression, though in the last three weeks it had improved very rapidly. There was a distinct lilac color over the surface which could not be very well seen at night.

Dr. VEIEL (Cannstadt, Germany) said that he understood these cases were treated with mercury in this country, and he would like to know if a good result was obtained by such treatment. In Germany they always gave arsenic for the condition.

Dr. GEORGE HENRY Fox said that the prognosis of these cases of general lichen planus was better than when it occurred in limited areas. He had had cases of this eruption limited to the arms which he was anxious to cure, but which did not respond after long treatment, while many of these cases of generalized lichen planus had a tendency to get well speedily. He had spoken once or twice of a case in the Vanderbilt Clinic where the patient was put on a strict bread and milk diet and the condition quickly disappeared in a few days.

Dr. BRONSON inquired whether there was much itching in the case, and Dr. Trimble replied that it was quite excessive at first, but now seemed to be controlled by an application of a five per cent. carbolized oil. Dr. Bronson then said that he had found that the generalized forms were not attended with so much itching as the localized forms, and that his experience confirmed what had been said of the capricious nature of the disease. He had seen cases where no change in the mode of life or diet was made and yet the eruptions would rather suddenly disappear.

Dr. JACKSON said that he had had a case similar to the one cited by Dr. Sherwell. The patient was a woman, nervously exhausted at the end of the social season, who had a most severe and generalized lichen planus. She was a patient of a prominent dermatologist in this city, and had baffled his best endeavors. She went on a steamer for Europe, intending to take the cure at some baths. Before she reached the other side she was practically a well woman.

As to Dr. Veiel's question, he would say that the practice of giving the protiodide of mercury was very common in this city. He had seen some very prompt cures from its use.

Dr. HOWARD Fox, in answer to the question asked by Dr. Veiel, said he thought that mercury was used in place of arsenic by a large number if not the majority of American dermatologists for the treatment of lichen planus. He said that it was his routine method of treatment and that he had seen some brilliant results from its use.

Dr. TRIMBLE said that Dr. Veiel's question in regard to mercurial treatment had already been answered by two of the other members. He himself inclined to prefer the bichloride of mercury rather than the protiodide, though he had used both. It was quite the routine treatment in New York at the present time to use mercury internally for lichen planus. This case had itched constantly at first, but yielded under carbolized oil after other remedies had been tried. The use of the oil would account for the absence of the scaling. Referring to Dr. Robinson's remarks about the transition from one condition to another, he recalled a case at the clinic where a man had presented himself with a distinct erythematous eczema of the face and neck, and a little later broke out with a generalized eczema which seemed inclined to recur: after

treating it for several weeks it was brought under control, and practically cured. Four or five weeks later the patient returned with distinct hypertrophic lichen planus lesions on his legs. He had no psoriasis, but the case illustrated how sometimes two diseases would occur in the same case. The eczema was unmistakable, and after that was cured he developed the hypertrophic lichen planus lesions.

DR. BRONSON inquired whether the lichen planus preceded the eczema; if so the scratching due to the lichen planus may have produced the eczema.

DR. TRIMBLE replied that at first they had not discovered any lichen planus lesions, although the patient was carefully examined. He seemed, at first, to have an ordinary case of eczema; after this was practically cured, he discontinued his visits to the clinic. Several months later, he appeared with the hypertrophic lesions on the legs.

**Large Flat Papular Syphilide, Treated with Ehrlich's "606." Presented by DR. GEORGE HENRY FOX.**

The patient was a woman who had received an injection of 0.5 gm. in suspension on October 13th. The spirochætæ had disappeared from the papules at the end of seventy-two hours. The Wassermann reaction had remained positive. The eruption had almost entirely disappeared, leaving pigmented macules in place of the solid papules. The result was certainly no better than that which might have been expected from vigorous mercurial treatment. She had gained five pounds in weight since the injection. A photograph of the eruption before treatment was presented.

**Small Flat Papular Syphilide Treated with Ehrlich's "606." Presented by DR. GEORGE HENRY FOX.**

The patient was a woman who had been injected on October 28th, with 0.4 gm. of "606" in suspension. The spirochætæ could not be found in the papules at the end of seventy-two hours. The Wassermann reaction had remained positive. The patient showed marked improvement in color and general appearance at the end of five days. The eruption was disappearing rather slowly.

**Gumma of the Clavicle Treated with Ehrlich's "606." Presented by DR. GEORGE HENRY FOX.**

The patient was a woman who had received 0.4 gm. of "606" in suspension on October 25th. The Wassermann reaction had remained positive. A tubercular syphilide of the lip that had existed for twelve years in spite of internal anti-syphilitic treatment had entirely disappeared in about ten days. A gumma of the inner end of the clavicle the size of a hen's egg had almost disappeared. A wax model of the gumma before treatment was presented.

**Papulo-Squamous Syphilide Treated with Ehrlich's "606."**      Presented  
by DR. GEORGE HENRY FOX.

The patient was a man who had been presented by Dr. Fordyce at the last meeting of the Society on account of the unusual clinical appearance of the eruption. He had received an injection of 0.5 gm. of "606" in suspension on October 28th. The spirochætae had disappeared from the papules at the end of seventy-two hours. The Wassermann reaction had remained positive. Several mucous patches had disappeared in a few days and the eruption was also rapidly disappearing. There had been a decided improvement in the patient's general condition.

**Gummatous Ulceration of the Palate Treated with Ehrlich's "606."**  
Presented by DR. GEORGE HENRY FOX.

The patient was a man who had previously lost a portion of the gums from a specific ulceration. He had been treated with mercury during the past year but had borne the drug very badly. He presented a deep ulceration involving the entire hard palate and four-fifths of the soft palate. He had been given an injection of 0.5 gm. of "606" in suspension on November 16th. Since then the ulceration had healed in an astonishing manner and was only one-half of its original size. The Wassermann reaction had been negative before as well as after the injection, due probably to the mercury he had previously taken. A wax model of the palate before treatment was presented.

**Syphilitic Laryngitis Treated with Ehrlich's "606."**      Presented by  
GEORGE HENRY FOX.

The patient was a man who had suffered from laryngitis for the past year. He had received an injection of 0.4 gm. of "606" in solution on November 10th. Three days later the mucous patches disappeared and on the fifth day after the injection the patient's voice was apparently normal. The Wassermann reaction had remained positive.

Dr. WALKER said that on coming home from Siam the news of this new remedy had been one of his surprises, and he was delighted to be here just as it was being experimented with. He had been much pleased with the excellent results he had seen, and was a little anxious to know what would be done with it in the Far East. There they used mainly the inunction treatment and obtained good results. He hoped they would be able to use this new remedy in Siam with good results, for there was much leprosy there.

Dr. BULKLEY said that one of his cases at the hospital had been treated with this remedy and had not seemed to be affected very materially. The patient had a good deal of pain from the injection. Some of the members had seen this case at the hospital. There was some question as to where the infection was acquired, as he had never been exposed, but all agreed that the lesions were



syphilitic. He had improved steadily and materially under mercurial treatment and iodide. Then he was given the "606" and he suffered a great deal and was prostrated by it, with some subsequent benefit. Of course every one was in the same position of waiting for future developments from this remedy.

Dr. SHERWELL agreed with Dr. Bulkley in his closing remarks, that the profession were still in doubt in regard to the value of the treatment, and he did not think that the effects on the particular case of gumma of the clavicle were entirely conclusive. The treatment had been given on October 25th and it was now November 22nd. That did not seem to be a tremendously rapid improvement. Had the patient been given a thorough course of the ordinary hypodermic injection of mercury alone, it might probably have done just as well, if not better. Some effect ought to be produced on any condition in that time by the ordinary methods. Everyone was familiar with the inhibitive, and the alterative action of arsenic in combination with mercury, and it had been used in various ways. One combination tablet triturate, put up by Frazer twenty years ago, he had used for years in the hospitals to which he had been attached, and they called it the "orthodox," giving directions to take such and such a dose three times a day. He had always believed in the potency or adjutancy of arsenic in combination with mercury and iodide in lues. He had talked with Dr. Keyes on this subject many years ago when the Doctor published the first edition of his book, and it had been advocated in his later works. This tablet triturate "orthodox" had also been made by Squibb for many years.

Dr. KLOTZ said that he had lately made a few injections in the German Hospital, but he could not say much as yet about the results. In a case of pulmonary syphilis the effect was a remarkable one: the breathing became much easier almost immediately, although the dose was not a very large one. A case of parenchymatous keratitis showed improvement; in another one a recurrent papular syphilide disappeared very promptly. Another patient who received the injection only a few days ago, came to him last year with extensive ulcerations on the left shoulder, arm and back, which had been treated for eczema for two years. He had a chancre eighteen years previously, but had never been treated internally. After eighteen injections of the salicylate of mercury the ulcers were all healed by the end of December, but lately the patient came to the hospital with symptoms of beginning tabes. The speaker had seen the most remarkable effect of "606" in a patient who had been treated for some time in the German Hospital; he had gummatous ulcers of the lip, nose, extremities, etc., which would yield to the various methods of mercurial treatment, only to be followed by other ulcers on different parts of the body. He had received "606" at the Lebanon Hospital and was presented before a number of societies and showed, indeed, wonderful improvement, particularly of the general health.

Dr. VEIEL said that when he left Germany, he and his son had treated in the City Hospital only ten cases, but they were nearly all cases in which mercury or iodide had produced no effect. Some of them had ulcers of the pharynx, like the case shown by Dr. Fox, and in one the uvula was destroyed. The effect of the "606" was marvelous. In a fortnight all were healed. In two cases they did not obtain a good effect, but they had not employed enough of the remedy—they had only used 0.3 gm. Later, they gave a dose of 0.6 gm., and the effect was excellent.

Dr. BRONSON, referring to Dr. Sherwell's remarks, said that the fact of arsenic having been long recognized as a valuable remedy in syphilis, did not at all detract from the originality of Ehrlich's discovery. The main point in Ehrlich's method was to give in one dose—as large as the patient could tolerate

—a quantity of arsenic sufficient to kill all the spirochætæ in the body at once, which could not be accomplished by long-continued smaller doses because, so it was claimed, they would gradually tend to give to the spirochætæ the same tolerance or immunity toward the drug that they do to the human system. Therefore, if the Ehrlich treatment was to be used, it were much better that no arsenic had been given before.

A point that was unsatisfactory in these cases was the continuance for such long periods after the injections, of a positive Wassermann reaction. He would like to hear from Dr. Fox with regard to the effect on the spirochætæ in the cases presented.

Dr. HOWARD FOX said that fourteen cases had been treated in his father's service at the Skin and Cancer Hospital, and that he had had the opportunity of following most of them very closely. Examination for the spirochætæ pallida had been made by Dr. Udo J. Wile with the dark-field illumination in five of the cases. At the end of twenty-four hours after treatment the spirochætæ had greatly diminished in number. At the end of seventy-two hours no spirochætæ could be found in any case.

The Wassermann reaction had been made in every case at weekly intervals. Dr. Noguchi had tested each serum with his modified reaction and Dr. Fox had examined each serum by the original Wassermann method. The results obtained by Dr. Noguchi had not as yet been reported. Dr. Fox in his examination had found that a few of the fourteen cases gave a negative reaction before treatment. In most of the cases, however, it had been positive. In no case had a positive reaction become negative since the injection of "606." The time, however, that had elapsed since the treatment, had been rather short. The case about which Dr. Bulkley spoke gave a negative reaction before the injection. He had previously received a good deal of mercury.

Dr. Fox said that he realized that no general conclusion could be drawn from their small number of cases. It was sufficient, however, to give some impression of the value of the new remedy. The action of the drug in a few cases upon the general condition of the patient was certainly striking. Several patients showed marked improvement in general appearance at the end of three or four days.

With regard to the cases presented, Dr. Fox thought that the results in the women with the papular syphilides were only moderately good. They were certainly not better than the results that might have been obtained by vigorous mercurial treatment. The result in the case of the woman with the gumma of the clavicle was, he thought, excellent. The gumma had nearly healed and a tubercular syphilide of the lip had disappeared very rapidly. The result in the man with the papulo-squamous syphilide was also, he thought, very satisfactory. The improvement that had followed in the case with the extensive ulceration of the palate was certainly remarkable. He had been treated with mercury during the past year, but in spite of treatment had lost a portion of his gum from syphilitic ulceration. He had also borne mercury very badly.

The result obtained in the case of a man who could not be presented but whose photograph was shown, was disappointing. The patient had suffered from a pustulo-crustaceous syphilide of malignant type that had resisted ordinary mercurial treatment. He had received 0.4 gm. of "606." Rapid improvement in general health and almost complete disappearance of the lesions followed the injection. A brilliant effect apparently had been obtained. In the last few days he had, however, suffered a relapse due, perhaps, to the fact that the dose of "606," namely, 0.4 gm., had been too small.

Dr. ROBINSON said that if his memory served him rightly, Dr. Fox's ex-

perience with the Wassermann reaction did not coincide with that of the European observers.

DR. VIEL said that they had had the same experience as Dr. Fox—the Wassermann reaction when positive at first remained positive. In his ten cases he had not seen a positive Wassermann when the injection was given that did not remain so for a fortnight or three weeks after.

DR. TRIMBLE said that Dr. Fox had mentioned the interesting points in the cases presented, but he would like to refer to one not shown to-night; a case of luetic ulceration of the leg which was considered to give a very brilliant result, but relapsed. This case was a malignant one, and the healing was very rapid, after the use of "606," and now, after the relapse, the man seemed to be in almost the same condition as when the treatment was started. The question was, were we going to have relapses? If we could not manage these cases with "606" without relapses, then we had no very great advantage over the old injection treatment with mercury—unless a second or a third injection would bring about the desired result. The question of the relapse was one of the most interesting points. If a relapse was seen, it was against "606." However, as suggested in Germany, it might be that such cases had not had a sufficient dose, and a cure might be obtained later by increasing the dose. It certainly was remarkable how the spirochætæ disappeared; that could not be accomplished so quickly with mercury. Many of the cases did not seem to have progressed any better under "606" than with mercury. However, if we knew they were cured after "606," it would make very little difference how slowly the outside manifestations disappeared.

DR. GEORGE HENRY FOX said that by comparing these cases in his service at the Skin and Cancer Hospital with those which he had seen treated by Dr. Gottheil at the City Hospital, he was convinced that Ehrlich's discovery was a remarkable one and was capable of producing some marvelous results. Its exact value could not be determined within a year or two years, or perhaps more. Its career would doubtless be much like that of the X-ray. As the members of the Society knew, in the early days of that remedy some took it up very enthusiastically and thought it would cure everything, and now many were ready to condemn it altogether. Most of us recognized it as a powerful and efficient remedy, capable of doing a vast amount of harm, but also capable of producing good results which no other agent could accomplish. Probably Ehrlich's remedy would, the speaker said, enable us to accomplish results in the treatment of syphilis which we had never been able to attain before, but we should have to wait until it had been tried in a large number of cases before we could pass any positive opinion upon it.

DR. FOX said that the six patients presented were some of those who had recently been treated with "606" in his service at the Skin and Cancer Hospital, by his assistants Dr. William B. Trimble and Dr. Howard Fox. In some instances the results had been strikingly good. In others they were no better than the results that could have been attained by mercury.

DR. BULKLEY inquired the size of the dose which Dr. Fox had given, and Dr. Fox replied 0.6 gm., although he had heard of some cases that had received an entire gram. Dr. Bulkley then said that he had never seen more than 0.6 gm. given, to which Dr. Fox responded that it was possible they had been a little too cautious and might have given too small doses. He then asked Dr. Viel what injection had been used in the cases he had treated.

DR. VIEL replied that he used the suspension, as Ehrlich had recommended, giving it by intramuscular injection in the gluteus maximus muscle.

DR. KLOTZ stated that Ehrlich had lately insisted on the intravenous injec-

tion of the remedy wherever possible, in preference to the subcutaneous and intramuscular methods.

The apparent fact that old ulcerating cases that were not affected by mercury, or could not tolerate it in sufficient quantity, was not in accord with the theory which led to the introduction of "606," namely, that it was principally directed against the spirochæta which in such cases had been found only in small numbers or frequently not at all.

As to the immediate therapeutic results in general and in the cases presented to-night, Dr. Klotz thought that we could obtain the same or even better results with mercurial treatment; he had sometimes been greatly surprised by the effects from a single injection of the salicylate of mercury or calomel on late gummatous affections. "Therapia sterilisans magna," might possibly also be obtained with mercury if we would apply it in sufficiently large quantities. French authors, like Leredde, had for several years claimed that we were giving mercury in insufficient doses. This idea had, among others, led to the recommendation by Jacquet of a "plurimercurial" treatment consisting of the simultaneous administration on the same day of pills of the protiodide by the mouth, of Van Swieten's liquor by rectal injections, and the intramuscular injection of one centigram of the red iodide and the inunction of two grams of blue ointment. All these applications were to be repeated for several days in succession and to be taken up again after a more or less extended interval.

Dr. TRIMBLE said that in Dr. Fox's service at the Skin and Cancer Hospital, they were making some comparative tests with calomel. These had just been started—giving a large dose of calomel, perhaps two or three doses, to note how quickly the cases were relieved under calomel as compared with those treated with "606." Probably the Wechsellmann method, which was the use of an insoluble preparation, might account for the comparative slowness with which some of the cases were yielding—it created a magazine of the drug in the system which was taken up very slowly. The method used lately, known as the Lesser method, was in a soluble form. For this reason the insoluble preparation might account for the two cases which Dr. Fox exhibited, which were yielding very slowly.

### Lepra (?). Presented by Dr. TRIMBLE.

The patient, a young man of nineteen, when first seen about a week ago, had two lesions on the right forearm, a brownish macule on one leg, and no other lesions. The two lesions on the arm were rather whitish, with a livid macule in the centre of one. They were anæsthetic, and the ulnar nerve seemed to be somewhat enlarged. The patient was a native of South America. The case appeared to be one of lepra, but that was simply a clinical diagnosis. One would not wish to make such a diagnosis positively from three small lesions.

Dr. BRONSON said that it was a very suspicious case. He had found decided enlargement of the ulnar nerves and the spots of anæsthesia could hardly be accounted for except as due to leprosy.

Dr. GEORGE HENRY FOX said that the limitation of the lesions to one arm and their appearance without the test of anæsthesia, seemed to indicate something beside lepra, perhaps an inflammatory condition of the skin, resulting from an infection.

Dr. BULKLEY said that one could not judge from the lesions alone, for other

lesions were also anæsthetic. He would not consider anæsthesia alone in one or two places a sure sign. The condition could only be determined by excising one of these lesions, and if the lepra bacillus were found the diagnosis would be positive. He would not feel inclined to have more than a slight suspicion that Lepra might develop later.

DR. TRIMBLE said that he had only presented it as a suspicious case, and not with a positive diagnosis. However, he would like to ask the question, what other condition in dermatology would give whitish areas with brownish macules, and anæsthesia, and enlargement of the ulnar nerve? He had made a tentative diagnosis only. The fact that the patient came from South America rather confirmed his suspicions. He did not know this fact at first, but when that was known the diagnosis seemed to be more likely. If the patient consented, the brownish macule would be excised and examined.

### Leprosy. Presented by DR. BULKLEY.

This patient had been presented at the previous meeting. The patient was a young man of French descent from the West Indies. He had a perforating ulcer under the right great toe, and suffered some pain from it. At first it was thought to be a simple ulcer, but further examination showed that he had anæsthesia of both legs and arms, and on looking still more carefully two or three small lesions were found, one on each little finger, and one on the fourth finger. Portions were excised and examined and were found to be full of the lepra bacillus.

He had been given chaulmoogra oil three times a day, and had been using externally an ointment of chrysophanic acid and ichthyol. Under that the ulceration of the toe had entirely disappeared and the lesions on the fingers had improved very materially.

For the last few weeks he had been suffering considerably, for he had been standing up most of the time. There was a marked enlargement of both ulnar nerves; there was a good deal of weakness of the hands, and some shrinking of the muscles.

DR. BULKLEY said he would like to know whether any one had seen small lesions like this so early. The patient had had these lesions for a year, and had had the perforating ulcer for a year and a half, and the shrinking of the hands for perhaps a year or so.

DR. GEORGE HENRY FOX said that he could not recall any early tubercular lesions, but remembered the case of an English army officer from the West Indies with a well-marked macular eruption of some three or four months' standing. He was a strong, healthy looking man, excepting these lesions.

DR. WALKER said that he was going to look into the subject of leprosy on his return to Siam. Up to this time not much had been done for such patients, but now an effort was being made to segregate them. The Government had given an island for this purpose, and the question could probably be studied. He was at present working in the Post-Graduate Hospital Department of Tropical Medicine, and had made a scraping from an area where there was no lesion, and isolated the organism. It might have been found anywhere. He had not before thought of this.



DR. GEORGE HENRY FOX read a memorial sketch of Dr. Piffard and it was moved and seconded that this be published in THE JOURNAL.

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NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Stated Meeting held April 5, 1910.

DR. SIGMUND POLLITZER, *Chairman*.

**Pemphigus Foliaceus.** Presented by DR. HOWARD FOX.

This case was shown before the New York Dermatological Society on December 21, 1909, and reported fully in THE JOURNAL for March, 1910, p. 118.

DR. POLLITZER said that it was hazardous in a case presenting such unusual features to venture to differ from those who had observed it carefully for months. Yet with the present appearance of the case he could not accept the diagnosis offered. Pemphigus foliaceus was a very severe disease, usually fatal in from six to eight months; its ruptured vesicles left raw surfaces; ulcers would form even without apparent vesicle formation; the skin was so delicate that it could often be rubbed off with the hand, and pressure on top of a vesicle would enlarge it, driving the fluid into the surrounding epidermis. None of these symptoms was observed in this case, which in his opinion was not pemphigus at all. Many of the lesions looked as if they were simply red papules, and had never been blisters. In the scalp there was a thick scaly erythroderma; there were no vesicles there or in the mouth. He attached little importance to the finding of the bacillus pyocyaneus, as that organism was so hardy and so pervasive that when once it had obtained a foothold it was very apt to render impossible the cultivation of any other bacteria that might be present with it.

DR. HOWARD FOX said that the patient had improved greatly since his arrival from Johns Hopkins six months ago. He would be very loath, after a single examination, to overturn a diagnosis made after months of careful investigation.

**Lupus Erythematosus Treated with CO<sub>2</sub> Snow.** Presented by DR. DITTRICH.

Dr. Dittrich said that when he had presented this case of extensive lupus erythematosus of the face involving the nose, the left cheek, eyes and ears, to the Section on December 7, 1909, he had promised to show it again after the treatment. The affection was of eight years' duration and the man had used all kinds of medication and applications without avail. He gave up all hope of ever being helped. Eight applications of the solid carbon dioxide had been made at the Post-Graduate Hospital. The duration of application was from thirty seconds on the nose with moderate

pressure to one minute on the lesions on the cheek with firm pressure. The speaker did not present this case as cured, as there was a small focus left under the left eye, which had not yet been treated. But the case was decidedly improved, and the active process on the cheek and nose had been stopped. There had been no internal medication. The man himself declared this to be the most successful treatment ever employed.

**Keratosis Palmaris et Plantaris.** Presented by DR. WEISS.

The patient was a Hungarian, fourteen years old; twelve years in this country. About nine months ago, scaly patches appeared in the middle of the right palm, and at the same time the soles of the feet were similarly affected. When the case was presented the palm of the left hand was covered with thickened, brownish-yellow, calloused epidermic plates, like a shield of horny consistency, and between these callouses, there were several painful fissures which interfered with motion and prevented extension of the hand. On the soles the same process was visible, but in a lesser degree, probably on account of the heat and moisture of the parts.

DR. HOWARD FOX said that he considered the case to be one of chronic eczema, with a verrucous tendency.

DR. POLLITZER said that he would call this a keratoid eczema.

DR. WEISS said that the lesions had softened greatly under treatment with lanolin and were much less keratotic. He accepted the diagnosis of keratoid eczema.

**Erythema Multiforme.** Presented by DR. COE.

The patient was a male, twenty-two years old, single. Two years ago he had had a similar attack involving the hands and mucous membrane of the mouth. Four days before the case was presented a spot appeared on the right index finger, followed by others on the hands, arms, and legs. At the same time an eruption appeared along the mucous membrane of the lips, where there were many superficial lesions of various sizes with marked inflammatory areas about. There were typical lesions of erythema multiforme on the hands, feet, and arms.

DR. HUBBARD said that he had that day seen a case like the one presented. The lesions had appeared first on the tongue, then on the hands, and later on the cheeks.

**Ulceration of the Tongue, Probably Tuberculous.** Presented by DR. TRIMBLE.

The case was previously shown before the New York Dermatological Society, on February 22, 1910 (*Jour. Cutan. Dis.*, August, 1910, xxviii, p. 407). The ulceration had encroached on the right side, cross-

ing the frenum, part of which remained healthy. The ulcer which was not very deep, had a yellow base and sloping edges.

DR. HUBBARD said that the character of the ulceration and of its edges was very suggestive of epithelioma.

DR. HOWARD FOX said that no blastomycetes had been seen in this case. Microscopical examination proved that it was not epithelioma, but left the diagnosis in doubt, between syphilis and tuberculosis.

DR. POLLITZER said that the edges of the ulcer were too soft for epithelioma and too hard for gumma, and that from its appearance and history it was probably tuberculous.

### **Papulo-Pustular Syphilide.** Presented by DR. MACKEE.

The patient was a colored man with a very dark skin, thirty years of age, from Dr. Fordyce's clinic. The eruption began two weeks ago on the abdomen and quickly became generalized. The hands, the feet, and the mucous membrane were free. The eruption consisted of hard, rather superficial papules, many of which were capped with a scale. Most of the lesions were flat, hard and shiny. Many of them were polygonal in shape. A few of the papules were conical, and there were many pustules present. The latter lesions seemed to develop from the papule. There was very little tendency toward grouping, and the lesions followed the natural lines of the skin. There was a general and well-marked adenitis. There were no subjective symptoms excepting backache. There was no evidence whatever of a primary lesion, and the patient stated that he had taken no drugs previous to the appearance of the eruption.

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### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the College of Physicians Building, on May 9, 1910. DR. CHARLES N. DAVIS, *President*.

### **Dermatitis Herpetiformis (?).** Presented by DR. STELWAGON.

The patient exhibited was a male of forty-five years, who gave a history of having had the present eruption continuously for four years. The patient had been under Dr. Stelwagon's care during the last few months. The eruption was now almost limited to the extensor surfaces, the arms, particularly in the neighborhood of the elbows, and the legs. There were, however, a few lesions in the vicinity of the shoulders, the axillæ, the buttocks, and the thighs. There was a marked tendency to grouping. The lesions were mostly papulo-vesicular in type. There was intense pruritus. The face, as well as the trunk and the extremities had all been involved at various times. Arsenic apparently controlled the disease but

produced pigmentation of the skin, even in moderate doses and over but a short period. There was also a mild arsenical keratosis present on the palms and the solès.

**Pellagra in a Child.** Presented by DR. HARTZELL.

The patient, a girl of nine years, had always lived in Pennsylvania, and until last August had always been plump, strong, and healthy. When the patient first came under Dr. Hartzell's care, over two months ago, she was extremely emaciated and looked as it in a stuporous condition. There was marked derangement of the stomach and the bowels. There had been several loose stools, each day, for the last eight weeks, before coming under Dr. Hartzell's observation. The loss of flesh started last August. Since the late summer the patient had been very dull mentally; "would sit all day without moving;" "always crying." The forehead, the cheeks, the nose, and the backs of the hands were brown and exfoliating, at the time of her first visit. According to the history, after being exposed to the sunshine for several days, the face and the hands suddenly became red, "like sunburn" over night. The eruption was sharply marginate on the hands, ending abruptly at the wrists, and resembled an iodine dermatitis. Since the patient had been under Dr. Hartzell's care, the bowels had remained loose and more frequent than normal, there had been an irregular temperature, the mental dullness had somewhat disappeared, and there had been some gain in weight.

**Case for Diagnosis.** Presented by DR. HARTZELL.

A woman of thirty-seven years gave a history of having noticed the present lesion for three years. There was a large, split-pea-sized lesion on the left ala of the nose, the centre was slightly depressed, and the circumference somewhat raised, with a faint suggestion of a "pearly" border. The lesion was quite superficial with very little infiltration. There had been no disagreeable sensations until recently, the patient now complaining of considerable "stinging."

DR. HARTZELL mentioned the resemblance the lesion bore to a porokeratosis but was inclined to believe that it was in reality an epithelioma.

DR. STELWAGON said that he thought most of the cases of porokeratosis occurred in younger individuals than the present patient.

DR. SCHAMBERG thought an unusual type of lupus erythematosus should be considered.

**Psoriasis in a Negress (?).** Presented by DR. HARTZELL.

A negress, seventeen years of age, gave a history of having had the present eruption for one month. The patient was married and had a healthy infant of five months of age. The eruption was almost entirely

limited to the extremities, although a few patches were noted on the trunk; the face and the scalp were not attacked. The lesions were mostly dime-sized, with a silvery-white scale on the surface, sharply marginate, slightly raised, and showed some infiltration. The palms of the hands and the soles of the feet were free from lesions. There was a tendency for the lesions to become confluent on the knees. Dr. Hartzell thought the case was probably one of psoriasis, but because of the rarity of the disease in the negro, syphilis should be very carefully excluded.

**Tuberculosis Cutis, with an Underlying Lymphangitis.** Presented by  
DR. KNOWLES.

The patient was a girl, born in Italy, ten years of age, and with negative personal and family histories. According to the history, five years ago the glands below the neck became enlarged and a short time afterward the eruption was noticed upon the skin. There was now a marked enlargement of the submental and submaxillary glands. In the submental region, over the enlarged lymphatic glands, there was a somewhat linear, one by one-half inch, reddish, deep-seated, infiltrated, slightly crusted patch, made up of reddish-yellow nodules, resembling those found in lupus vulgaris.

**Case for Diagnosis.** Presented by DR. DAVIS.

A negro infant of three years of age was exhibited with an eruption of three weeks' duration. The lesions consisted of clustered groups, of millet-seed-sized papulo-vesicles, with a slight crust on their summits. The eruption was distributed on the left side of the lower abdomen, a few were found in the neighborhood of the umbilicus, and about one-half dozen, on the upper portion of the right upper leg. No history could be elicited of any drug having been given internally.

DR. STELWAGON thought the eruption resembled markedly the type of outbreak caused by the internal administration of the iodides.

DR. SCHAMBERG remarked the difficulty, in various cases, in differentiating variola from the varioliform type of bromide eruption.

**Case for Diagnosis (Previously Exhibited).** Presented by DR. SCHAMBERG.

The patient had been presented by Dr. Schamberg on several occasions to the Society, because of the difficulty in the diagnosis; the annular eruption on the dorsal surfaces of the hands and the face, resembling both an annular lichen planus and an annular type of syphilis. The diagnosis was now clear, as a marked lichen planus, of the usual type, had developed



upon the hands, the forearms, the face, and the mucous membranes of the lips. The Moro and the von Pirquet tests were positive.

**Lupus Vulgaris and Epithelioma.** Presented by DR. DAVIS.

The patient exhibited was a frail-looking woman of forty-one years of age. Tuberculosis of the hip developed at three years of age and the cutaneous lesions seven years later. No history of tuberculosis on either side of the family could be elicited. There were several patches present, from two to three inches in length, oval, reddish in color and made up of typical yellowish-red nodules. The largest area involved the right side of the neck and the ear; active lesions were also present on the nose and the left side of the forehead. All of the areas showed a considerable amount of scarring. Six years ago an ulceration of the sound skin of the right ala of the nose commenced, the process extending to the adjacent cheek. There was at present a quarter-dollar-sized, ulcerated area, with an irregular, pearly border, involving the right ala of the nose and the cheek. A considerable portion of the ala had been destroyed. The patient gave a marked reaction to both the Moro and the von Pirquet tests. Dr. Davis emphasized the fact that the lupus lesions were very superficial and benign in the present case, while the epitheliomatous ulcerations were deep and markedly destructive.

**Lupus Vulgaris (Previously Exhibited).** Presented by DR. DAVIS.

The patient, a boy of twelve years, was exhibited at a former meeting of the Society, and was again exhibited to show the result of treatment. There was one large patch of lupus present involving over one-half of the cheek, the neck, and the chin. The area was first curetted, caustic potash was then lightly applied, and a forty per cent. pyrogallol plaster was then used for four days, continuously. The result was most gratifying.

**Lupus Erythematosus (Previously Exhibited).** Presented by DR. STELWAGON and DR. STOUT.

The present patient was exhibited at the last meeting of the Society, and was again shown because of the favorable and rapid response to treatment. A lotion of twenty grains of zinc sulphate and potassium sulphurette to the ounce of water had been used.

**Case for Diagnosis.** Presented by DR. FINCK.

A male of thirty-eight was presented with an eruption of five years' duration. Perifollicular pustules, pinhead in size, were noted on the

cheeks, the chin, the upper lip, and the neck. Two symmetrical patches, three inches in length by one inch in width, were observed on the cheeks, in front of each ear. These areas were whitish-yellow in color and consisted of scar tissue.

DR. FINCK said he thought the case came under the heading of lupoid sycosis.

DR. HARTZELL thought the scars were probably the result of treatment.

### **Recurrent Erythematous Syphiloderm.** Presented by DR. SCHAMBERG.

The patient, a male of thirty-two years, gave a history of having first had a generalized roseolar eruption, with the various concomitant signs of syphilis, seven months ago. An active course of treatment was administered, consisting of mercurial pills and twenty-nine inunctions of the official ointment of mercury. Two weeks ago, treatment having been stopped, the present eruption appeared, consisting of a typical syphilitic roseola, of the same type as was usually first seen in syphilis. The eruption was quite profuse, even the palms of the hands being involved.

DR. HARTZELL referred to a case, recently seen, in which a typical chancre redux developed in an extragenital syphilitic patient.

### **Secondary Syphilis.** Presented by DR. FINCK.

Dr. Finck presented a well-built male in middle life with a generalized eruption, consisting of pigmentary marks and scar-like lesions, which the exhibitor considered was a relapsing secondary outbreak.

### **Epithelioma Treated by Fulguration.** Presented by DR. PFAHLER.

Dr. Pfahler exhibited three cases of epithelioma of the lips and the mucous membranes in the mouth, showing the excellent result obtained from fulguration.

### **Carcinoma of the Penis.** Presented by DR. KNOWLES.

The patient was a negro male of forty-seven years, who gave a history of having had the present lesion for two years. There was a quarter-dollar-sized flat, hard, raised, button-like, reddish lesion on the inner surface of the foreskin, just behind the glans penis. The surface of the lesion was somewhat papillomatous, with a mucopurulent discharge. The inguinal glands were slightly enlarged. On drawing the foreskin slowly back over the glans penis the lesion flopped back like a true Hunterian chancre.

FRANK CROZER KNOWLES, M.D., *Reporter.*

PRESENTATION OF PATIENTS AND PHOTOGRAPHS AT  
THE 34TH ANNUAL MEETING OF THE AMERICAN  
DERMATOLOGICAL ASSOCIATION, WASHINGTON,  
D. C., MAY 3-5, 1911.

EXHIBITION OF PATIENTS.

**Xeroderma Pigmentosum.** Presented by DR. CARMICHAEL.

The patient was a female, four years of age, of American birth and of American parents. The family history was negative. The eruption, which began when the child was but a few months of age, was situated on the face, shoulders, neck, arms, and palms. It began as a pigmentation on the exposed surfaces. There were a number of warty growths on the face and a large tumor of epitheliomatous character under the left eye.

DR. HARTZELL said he thought the case was a very striking example of xeroderma pigmentosum.

**Xanthoma Tuberosum.** Presented by DR. CARMICHAEL.

The patient was a girl, seven years old. The duration of the present trouble was two years. There were lesions situated on the knuckles, wrists, knees, elbows, and buttocks, and were mostly rounded in outline—elevated and of moderately firm consistency. There was no sugar or indican in the urine.

DR. DUHRING said the case was very similar to the one reported by Dr. Hardaway, of St. Louis, about the year 1884. That case, however, was in an adult, and was seen by the speaker.

**Argyria of the Lower Eyelid.** Presented by DR. CARMICHAEL.

This was a case of argyria of the lower left eyelid and surrounding tissue in a young man. It was the result of a solution of argyrol injected into the tear duct four years ago.

DR. PUSEY said that this was the second case he had seen of argyria resulting from the injection of argyrol into the lachrymal duct. It was not generally recognized he believed that we might have a local deposit of the silver salt from argyrol used in this way.

DR. POLLITZER thought that possibly the lining membrane of the duct was perforated, and the argyrol was injected, not into the duct, but into the tissues.

DR. SHERWELL mentioned a case of argyria following the injection of argyrol into the lachrymal duct, which was somewhat eroded. In that case, the patient instituted a law suit on account of the cosmetic effect of the discoloration.

## EXHIBITION OF PHOTOGRAPHS.

**Generalized Herpes Zoster Associated with a Varicelloid Eruption.**

Presented by DR. ORMSBY.

The photograph was of a man, forty years old, who was suffering from generalized herpes zoster. On the fourth day of the eruption he developed a vesicular exanthem resembling varicella. Dr. Ormsby said that these cases of generalized herpes zoster associated with a vesicular exanthem were unusual.

DR. POLLITZER said the case was extremely interesting, but not unique. Personally, he had seen two good examples of a similar eruption, and there was a fair literature on the subject in French. Dr. Schamberg, with whom he had discussed the photograph, had also seen two similar cases. The condition was difficult to explain. There was no satisfactory theory of the origin of these vesicles and pustules, which appeared to be practically identical with those of herpes zoster.

DR. STELWAGON thought it could scarcely be said that a generalized eruption of this kind, associated with zoster was very common, although a certain number of cases had been reported in the literature. Personally, he had seen one case in the practice of Dr. Schamberg, and three cases in his own. All of his patients were adults, and the lesions resembled those of a well-developed chicken-pox.

DR. CORLETT said that some years ago he reported a number of cases of chicken-pox associated with herpes zoster. He had seen three cases, two in adults, and one in a child. He regarded them as cases of varicella associated with herpes, although he was unable to say what relationship, if any, they bore to each other.

DR. SHERWELL said he had seen one case of generalized herpes which was mistaken for small-pox. That case gave rise to a great deal of comment and excitement in the hotel in which the subject, a lady, was residing.

DR. WINFIELD said he had seen a case of herpes zoster associated with a vesicular eruption which had raised the suspicion of small-pox.

DR. HARTZELL said he had always been doubtful about generalized herpes. While it doubtless might occur, there was always a chance of one disease being superimposed on another.

DR. DURING said the few cases he had seen had been chiefly abroad. He was doubtful whether he could recall a single marked case of distinctly generalized herpes seen in Philadelphia. He considered, therefore, that the affection in this country must be rare.

**Guttate Morphœa.** Presented by DR. ORMSBY.

The patient was a woman, about twenty-three years old, in whom the lesions resembled the lichen planus of Hallopeau. These cases, the speaker said, had all been more or less confused with white spot disease.

**Tinea Versicolor.** Presented by DR. ORMSBY.

This photograph showed papular lesions occurring in the hair follicles. The eruption bore a close resemblance to a papular syphilide.

DR. DUHRING asked whether the papules were inflammatory or made up of epithelium? Judging from the picture, they appeared to be more or less inflammatory, and this brought up the question of inflammation which might occur in connection with tinea versicolor. He recalled a few cases where a mild form of superficial inflammation existed, not unlike that in superficial tinea circinata.

DR. ORMSBY, in reply to Dr. Duhring, said the lesions were entirely non-inflammatory.

**Winter Eczema.** Presented by DR. CORLETT.

Dr. Corlett showed the photograph of a young woman who came from Ireland five years ago. She had never suffered from eczema prior to coming to this country. During the past three winters she had developed an eczematous eruption on the backs of the hands. The lesions showed a tendency to symmetry. Dr. Corlett said he took this to be a typical example of the winter eczema which was not uncommon along the lake region, and for which he had suggested the name *dermatitis hiemalis*.

Photographs of the following cases were exhibited by DR. ENGMAN:  
**Scleroderma-Like Lesions Occurring After Hemiplegia and Associated With Uterine Cancer.**

**Striated Atrophy of the Skin Clearing up After Anti-Luetic Treatment.**  
**Mycosis Fungoides in the Budding Stage.**

**Ulcerations About the Anus Due to Tubercle Bacilli in Which the Ordinary Smears Showed Thousands of Bacilli.**

**Early Stage of Darier's Disease.**

**Bromide Eruption in a Child.**

**Vincent's Angina, with Ulcerations Around the Mouth.**

**Eczema of the Mouth.**

The last photograph was that of a boy who developed an eczema around the outside of the mouth as the result of rubbing the skin with his tongue. He was cured of the habit by the use of quinine ointment.

DR. CORLETT said he was very much interested in Dr. Engman's picture of Vincent's angina. The condition was new to him until recently. In a case which came under his observation, he had tried the liquor antisepticus, but without appreciable effect.

**Fatal Iodism, with Bullous Hæmorrhagic Lesions.** Presented by DR. PUSEY.

The condition occurred in a woman in whom potassium iodide was persistently given, although in relatively small doses.

**Fatal Iodism in a Baby.** Presented by DR. PUSEY.

The eruption was caused by iodine ingested from mother's milk. The case was admitted to the hospital as a congenital syphilis. This, how-



ever, was excluded and a diagnosis of ioderma made on the clinical findings; in addition the Wassermann reaction was negative and iodine was found in the urine. The child died within a week after coming under Dr. Pusey's observation.

**Coccidioidal Infection.** Presented by DR. PUSEY.

The patient was a native of Poland who had a very extensive eruption, the lesions being serpiginous in character, with scaling in the centres and active borders. A clinical diagnosis was made of an atypical blastomycosis or an infection of similar sort. Subsequently, the organism was found of which photomicrographs were presented, showing endogenous sporulation and spines radiating from the capsules. The case ended fatally after a few months.

**Parapsoriasis.** Presented by DR. PUSEY.

The patient was a young man in good health who had had the eruption for about two years.

**Extensive Follicular Tuberculide in a Boy, Associated with Double Keratitis.** Presented by DR. PUSEY.

In this case the patient gave a negative Wassermann and a very positive von Pirquet reaction.

DR. HOLDER said that in connection with the von Pirquet test in recurrent diseases, they had given this test, as well as the Moro test a very thorough trial at Randall's Island in about forty children, all of them under twelve years of age. These were seen in the eye and ear wards of the hospital, as most of them were suffering from an aural discharge or keratitis. In 90% of these cases the von Pirquet test gave a positive reaction.

**Epithelioma Resembling Lipoma.** Presented by DR. PUSEY.

Clinically, the case was regarded as a lipoma, but a pathological examination of a section of the growth proved it to be a basal cell epithelioma.

**Two Cases of Paget's Disease.** Presented by DR. PUSEY.

An operation in one case had shown carcinoma of the breast, the other, carcinoma of the axillary glands.

**Alopecia Areata Associated with Syphilitic Alopecia.** Presented by DR. PUSEY.

**Extensive Idiopathic Atrophy of the Skin.** Presented by DR. PUSEY.

The patient was a middle-aged woman who had had an extreme degree of atrophy of the skin and distinct purplish mottling when she first

came under observation. A year later she developed a large ulcer of the leg which healed under potassium iodide and mercury.

DR. FORDYCE, referring to Dr. Pusey's case of idiopathic atrophy of the skin associated with gumma, said he did not think such a combination had been previously noted until he (Dr. Fordyce) described it. The possibility was that there was a primary involvement of the vessels, which led to this atrophy, and that it was really of syphilitic origin.

The following photographs were exhibited by DR. FORDYCE.

**Bullous Erythema Associated with Purpuric Lesions.**

**Lupus Vulgaris After Treatment with the X-Rays.**

**Marked Cachexia, with Recurrent Broken Down Gumma of the Face and Forehead.**

**Scar and Milia Following Chancre of the Chin.**

**Pigmented and Atrophic Lesion on the Chest.**

**Ichthyosis-Like Lesion on the Skin of a Leper.**

**Parapsoriasis.**

The last photograph was that of a man with a generalized scaly erythema, of ten months' duration, covering the trunk and extremities.

**Paget's Disease, Molluscum Body and Granuloma Annulare.** Presented by DR. HARTZELL.

Dr. Hartzell showed a photograph of Dr. Duhring's case of Paget's disease. He also showed three photomicrographs of the so-called molluscum body. Also a photograph of a case of granuloma annulare.

DR. HYDE said the case of granuloma annulare which Little had referred to as coming under observation of the speaker corresponded very closely with the photograph of Dr. Hartzell's case.

## NOTICES

### A LIST OF THE MEMBERS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION FOR 1910.

#### HONORARY MEMBERS.

AMICIS, DE, T.	Naples, via Médina, 47.
BOECK, CÄSAR.	Christiania, Kristian August Gade, 14.
FOURNIER, ALFRED.	Paris, rue de Miromesnil, 77.
HANSEN, ARMAUER.	Bergen, Norway.
HUTCHINSON, JONATHAN.	London, 15 Cavendish Square.
LESSER, EDMUND.	Berlin, Roomstrasse, 12.
MORRIS, MALCOLM.	London, 11 Harley St.
NEISSER, A.	Breslau, Fürstenstrasse, 112.

#### CORRESPONDING MEMBERS.

BERTARELLI, AMBROGIO.	Milan, via S. Orsola 1.
BROCQ, L.	Paris, 65 rue d'Anjou.
CAMPANA, R.	Rome, via Arenula.
DARIER, J.	Paris, 8 rue de Rome.
FINGER, ERNEST.	Vienna, General Hospital.
FOX, T. COLCOTT.	London, 15 Harley St.
GAUCHIER, E.	Paris, 11 rue de St. Petersburg.
HALLOPEAU, H.	Paris, 91 Bd. Malesherbes.
MACLEOD, J. M. H.	London, 11 Harley St.
MIBELLI, V.	Parma, via Ventidue Luglio.
RIEHL, G.	Vienna, Alserter 37.
SABOURAUD, R.	Paris, 62 rue Caumartin.
THIBIÈRGE, G.	Paris, 101 rue du Bac.
WALKER, NORMAN.	Edinburg, 7 Manor Place.
WICKHAM, L.	Paris, 10 rue Washington.

#### ACTIVE MEMBERS.

ANTHONY, HENRY GILES.	Chicago, 165 Dearborn Ave.
BIDDLE, ANDREW PORTER.	Detroit, 57 West Fort St.
BOWEN, JOHN TEMPLETON.	Boston, 14 Marlborough St.
BREAKEY, WILLIAM FLEMING.	Ann Arbor, 402 East Huron St.
BRONSON, EDWARD BENNET.	New York, 10 West 49th St.
BULKLEY, L. DUNCAN.	New York, 531 Madison Ave.
CAMPBELL, RALPH R.	Chicago, 100 State St.
CARMICHAEL, RANDOLPH BRYAN.	Washington, 818 17th St.
CORLETT, WILLIAM THOMAS.	Cleveland, 1935 Euclid Ave.
DEHRING, LOUIS ADOLPHUS.	Philadelphia, 3322 Walnut St.
DYER, ISADORE.	New Orleans, 2222 Prytania St.
ELLIOT, GEORGE THOMPSON.	New York, 36 East 35 St.
ENGMAN, MARTIN FEENY.	St. Louis, Humboldt Building.
FORDYCE, JOHN ADDISON.	New York, 8 West 77th St.
FOSTER, BURNSIDE.	St. Paul, 90 Lowery Arcade.
FOX, GEORGE HENRY.	New York, 616 Madison Ave.

- FOX, HOWARD.  
 GILCHRIST, T. CASPAR.  
 GOLDENBERG, HERMAN.  
 GOTTHIEL, WILLIAM S.  
 GRINDON, JOSEPH.  
 HARDAWAY, WILLIAM.  
 HARDING, GEORGE FRANKLIN.  
 HARTZEL, MILTON BIXLER.  
 HOLDER, OSCAR HOWE.  
 HOWE, JAMES SULLIVAN.  
 JACKSON, GEORGE THOMAS.  
 JOHNSTON, JAMES C.  
 KLOTZ, HERMANN GUSTAV.  
 KNOWLES, FRANK CROZER.  
 LEVISEUR, FREDERICK JACOB.  
 MONTGOMERY, DOUGLASS W.  
 MOOK, WILLIAM HENRY.  
 MORROW, HOWARD.  
 MORROW, PRINCE ALBERT.  
 ORMSBY, OLIVER S.  
 PARDEE, LUCIUS CROCKER.  
 POLLITZER, SIGMUND.  
 POST, ABNER.  
 PUSEY, WILLIAM ALLEN.  
 RAVOGLI, AUGUSTUS.  
 ROBINSON, ANDREW ROSE.  
 RUGGLES, E. WOOD.  
 SCHALEK, ALFRED.  
 SCHAMBERG, JAY FRANK.  
 SHEPHERD, FRANCIS JOHN.  
 SHERWELL, SAMUEL.  
 STELWAGON, HENRY WEIGHTMAN.  
 SMITH, D. KING.  
 TRIMBLE, WILLIAM B.  
 TOWLE, HARVEY P.  
 VARNEY, HENRY ROCKWELL.  
 WENDE, GROVER WILLIAM.  
 WHITE, JAMES CLARKE.  
 WHITE, CHARLES JAMES.  
 WHITEHOUSE, HENRY HOWARD.  
 WINFIELD, JAMES MACFARLANE.  
 ZEISLER, JOSEPH.  
 New York, 616 Madison Ave.  
 Baltimore, 330 N. Charles St.  
 New York, 701 Madison Ave.  
 New York, 154 West 77th St.  
 St. Louis, 3894 Washington Boulevard.  
 St. Louis, 4500 Olive St.  
 Boston, 419 Boylston St.  
 Philadelphia, 3644 Chestnut St.  
 New York, 501 West 120 St.  
 Boston, 437 Marlborough St.  
 New York, 11 East 48th St.  
 New York, 115 East 56th St.  
 New York, 616 Madison Ave.  
 Philadelphia, 332 S. 17th St.  
 New York, 680 Madison Ave.  
 San Francisco, Elkan-Gunst Building.  
 St. Louis, Humboldt Building.  
 San Francisco, Butler Building.  
 New York, 66 West 40th St.  
 Chicago, 100 State St.  
 Chicago, 34 Washington St.  
 New York, 51 East 60th St.  
 Boston, 16 Newbury St.  
 Chicago, 72 Madison St.  
 Cincinnati, 5 Garfield Place.  
 New York, 159 West 49th St.  
 Rochester, 348 University Place.  
 Omaha, 400 Bee Building.  
 Philadelphia, 1922 Spruce St.  
 Montreal, 152 Mansfield St.  
 Brooklyn, 33 Schermerhorn St.  
 Philadelphia, 1634 Spruce St.  
 Toronto, 22 Wellesley St.  
 New York, 39 East 28th St.  
 Boston, 453 Marlborough St.  
 Detroit, Washington Arcade.  
 Buffalo, 471 Delaware Ave.  
 Boston, 259 Marlborough St.  
 Boston, 259 Marlborough St.  
 New York, 38 East 49th St.  
 Brooklyn, 47 Halsey St.  
 Chicago, 100 State St.

LIST OF PUBLICATIONS OF THE MEMBERS OF THE AMERICAN  
DERMATOLOGICAL ASSOCIATION  
FOR THE YEAR 1910

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RESOLUTIONS OF RESPECT TO THE MEMORY OF DR. SIGMUND  
LUSTGARTEN BY THE MEMBERS OF THE NEW YORK  
DERMATOLOGICAL SOCIETY.

The New York Dermatological Society has to lament the death of Dr. Sigmund Lustgarten, an active member of the Society for the past twenty years.

All of the members feel deeply the personal loss of a genial comrade and from a scientific point of view the loss is even greater; missing, as we shall, his clear logical mind as demonstrated in the discussion of cases and of topics germane to the Society.

His decease, we feel sure, will be equally mourned by other medical societies and institutions of which he was such a distinguished member. Many have already expressed themselves by appropriate resolutions. Among these we may enumerate the American Dermatological Association; the German Medical Society; the Medical Board of the Mt. Sinai Hospital; the Medical Board of the Montefiore Home; and the Medical Board of the Hebrew Orphan Asylum.

His contributions to Dermatology and Pathology are known to the medical world and need no comment.

We would extend our sincere condolence to his bereaved family.

SAMUEL SHERWELL, M.D.

GEORGE HENRY FOX, M.D.

CHARLES T. DADE, M.D.

*Committee.*

## BOOKS AND REPRINTS RECEIVED.

*Books marked with an asterisk will be reviewed.*

Ueber Leukokeratosis (Kraurosis) glandis et praeputii. GALEWSKY, *Arch. f. Dermat. u. Syph.*, c. Nos. 1-3.

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VII. INTERNATIONAL CONGRESS OF DERMATOLOGY, ROME,  
SEPTEMBER 25-29, 1911

In May, the final program of the Congress will be published, giving all necessary information including the order of business, the scientific articles of each session, etc. In order to complete the program those who contemplate attending the meeting and read a paper, are requested to send the title together with a brief typewritten abstract to be placed on the program to the Secretary-General before May 7th.

In reference to the special reductions of price on the Italian Railways, the members of the Congress will find a special ticket for sale in all the Italian railroad depots and agencies at the price of L10.50 (\$2.10). With this special card a booklet will be sold with eight tickets, each one entitling the bearer to a trip at reduced rates of from 40 to 60 per cent., according to the length of the voyage. The booklet will be recognized for 45 days, and the coupons will be accepted on all trains.

Regarding hotel accommodation the Committee on Arrangements has accepted the offers of the Cook Agency (Esedra di Termini, Roma) and of Chiari and Sommariva, Piazza Venezia, Rome, who will assign the members to the different hotels, and give the addresses of the best restaurants in every Italian city.

The members are requested to write to either one of these agents and state the class of accommodation they desire.

A. RAVOGLI,

Secretary for the United States.

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## EPITHELIOMA OF THE UPPER LIP IN A PURE NEGRO.

BY H. H. KERR, M.D.,

Visiting Surgeon, Freedmen's Hospital, Washington, D. C.,

and

H. H. HAZEN, M.D.,

Clinical Professor of Dermatology, Howard University, Washington, D. C.

**I**N a rather careful search through the literature at the Surgeon General's Library we have been unable to find the record of any case of epithelioma of the upper lip occurring in a pure negro, therefore our case seems worthy of recording.

F. B., pure negro, male, fifty-seven years of age, from Chester, N. C., and a painter by trade, was admitted to the service of Dr. Kerr at the Freedmen's Hospital on the 29th of October, 1910, complaining of a sore lip.

His father had died of heart trouble, and his mother from an unknown cause; one brother and one sister had died of typhoid fever; there was no family history of tuberculosis, neoplasm, or insanity.

His past life had been rather uneventful; he had had the usual diseases of childhood, but since then he had been a very healthy man. He did not smoke or drink, and denied venereal disease.

His present trouble started one year before admission with a "sore place" on the inner surface of the upper lip near the median line. A scab would form and drop off, and each time it did so the patient would notice that the lesion had spread. This had continued up to the present time.

Examination showed a rather well-nourished man, who looked older than his years. The lungs were clear throughout, the heart

was slightly enlarged, the dulness extending slightly to the right of the sternum, and to the left almost to the nipple line. The sounds were clear but faint, and were irregular in rhythm. The pulse was 120 to the minute. The vessels were all thickened and non-collapsible. The urine was of rather high specific gravity, 1025, but was otherwise negative. The white blood count showed 12,200 cells, and a differential count of 500 cells gave: Polymorphonuclears, 71.8% ; eosinophiles, 0.4% ; large mononuclears, 0.6% ; small mononuclears, 23.8% ; transitionals, 3.4% ; no mast cells or myelocytes.

The entire left side of the upper lip and the outer third of the left side of the lower lip were involved. There were two deep ulcers, one at the middle of the upper lip, and the other at the corner of the lower lip. The two were connected by a mass of fungoid, sloughing tissue. The bases of the ulcers were sloughing and dirty. The inner edge of the fungous mass, where it was invading the face, was stony hard and deep seated. The whole inner surface of the upper lip was involved as far as the gums. The muscles of the cheek were slightly invaded. The submental and submaxillary glands were much enlarged. A portion of the hypertrophic tissue was removed for diagnosis. Sections showed typical epithelioma; the cells were of the squamous type, and there were many downgrowths that were more or less united, and there were numerous epithelial pearls.

Inasmuch as the X-ray has given notoriously bad results in carcinoma of the mouth and neck, we felt that it would be a waste of time to first try radiation. Therefore it was determined to first remove the glands and cauterize the growth of the lips, then give X-ray treatment, and finally repair the defect by a plastic operation.

On November 12th, under ether anæsthesia, the contents of both anterior triangles of the neck were dissected out *en bloc*. The platysma muscles were incised vertically in the median line, and transversely two fingers' breadths below the inferior maxilla. The incision was carried through all structures to the bone, and all glands, vessels, and some of the muscular tissues were dissected up from the deep muscles and removed in one mass as advised by Crile. The epithelioma was then thoroughly cauterized by the electric cautery. The patient stood the operation fairly well, but was given one pint of normal saline solution by rectum every four hours following operation. His pulse gradually returned to normal. On the fifth day after the operation the chart showed a temperature of 99° by axilla, a pulse rate of 92, and respirations of 24. He was then on a soft diet and very



Fig. 1.

Epithelioma of the upper lip in a pure negro.





comfortable. Suddenly on the sixth day the respirations ran up to 58, and the patient became weak and unable to sit up. On examination there was no consolidation of the lungs, but there were numerous coarse and fine râles at both bases. He failed to respond to stimulation, became delirious, and on the eighth day, he died as a result of hypostatic congestion of the lungs. An autopsy was refused.

We have attempted to gather some statistics concerning epithelioma of the negro, and especially epithelioma of the lip, but have been able to find very little. We shall give only those general statistics that appear significant.

The general death rate is summarized by McConnell. Per 1,000 deaths occurring in white males the rate was 50.1; in white females 83.2; in negro males 28.6; in negro females 66.2. These figures are taken from the census report, and are in harmony with the reports of the majority of the writers on this subject, with the single exceptions of Richardson and Matas, both of New Orleans. Howard Fox has carefully studied the question of epithelioma in the negro and gives the following statistics. In 4,400 cases, half in the white and half in the negro, he finds that there were 22 cases in the white and only 2 in the negro. Out of 6,272 whites and 9,073 negroes there were 5 cases in the negro and 46 in the white. In the same set of statistics there were 27 cases of papilloma in the negro and 22 in the white.

A study of the health reports from the District of Columbia, for the years from 1874 to 1902, shows the following deaths from cancer: white males 820, white females 1,605, negro males 208, negro females 666. During this period about one-third of the population was colored. A further study of the reports showed that 9 negroes died from cancer of the tongue as against 26 whites, 5 negroes from cancer of the mouth and 26 whites, 12 negroes from cancer of the face and 144 whites, and 3 negroes from cancer of the lips as opposed to 8 whites. However, we are inclined to think that these reports give too many cases in the negro, for we have been unable to find any in the negro is anything but very rare. It is interesting to note that surgeons in Washington who believe that cancer of the face or mouth out of the last 500 cases admitted to the dermatological service at the Freedmen's Hospital there were the following instances of epithelial growth, all occurring in pure negroes: Case 1; epithelioma of the upper lip, as reported above. Case 2; epithelioma of the lower surface of the tongue. Case 3; papilloma of the lip. Inasmuch as

out of those 500 cases there were only 167 that contained a bare trace of white blood it may be more than a coincidence that all of these cases occurred in the pure negro. Inasmuch as records do not show the amount of white blood in a negro we are unable to say whether or not epithelioma is more prevalent in the mulatto or in the pure negro.

With reference to the relative frequency of epithelioma of the upper and lower lips, statistics are much more satisfactory. Steiner reports 140 cases of epithelioma of the lower lip and 12 of the upper; Judd reports 153 of the lower and only 3 of the upper; Rowntree gives the ratio as 234 to 7, and further states that 6 times as many epitheliomata originate on the side of the lip as in the middle.

#### CONCLUSIONS.

1. Cancer occurs more frequently in the whites than in negroes.
2. Epithelioma is very rare in the negro, whether of skin or of mucous surfaces.
3. Epithelioma of the upper lip in whites is rare, in the negro unique.
4. Possibly epithelial growths are more common in the pure negro than in the mulatto, although Hyde and others believe that pigment is protective against epitheliomatous degeneration.

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A COMPARATIVE STUDY OF DERMATITIS REPENS AND  
ACRODERMATITIS PERSTANS.

By RICHARD L. SUTTON, M.D., Kansas City.

IN 1888, Crocker (*Diseases of the Skin*, 1st ed., p. 128) first described a peculiar, chronic, spreading dermatitis, which usually followed an injury, and was characterized by the development of vesicles or bullæ, with subsequent elevation and exfoliation of the epidermis at the periphery of the lesion.

The report was based upon a study of three cases of the disorder. The first was seen in a young man, who had recently undergone a surgical operation for the relief of an injury to a finger. The wound healed promptly, but at the edge a persistent dermatitis commenced, which gradually extended up the palm and then over the hand to the other fingers. The pathologic process appeared to involve only the margin of the affected area. At the border of the inflammation, which was sharply defined, the upper layer of the skin was undermined by fluid and slightly raised. The lesion slowly extended by the involvement and loosening of this epidermal collar. There was practically no pain, and very little itching. The denuded area was bright red in color, and very tender to the touch. Drops of clear or slightly turbid serum exuded and dried on the newly exposed surface. There were no constitutional symptoms. The patient was well nourished and his temperature remained normal throughout.

The second case developed in a woman twenty-eight years of age. The disease began on the wrist and spread down the hand and up the arm. Ultimately it reached the shoulder and, despite treatment, extended across the back and down the other arm to the elbow.

The third case occurred in a woman fifty-seven years of age. In this instance the disease followed a superficial burn of the finger. In all three cases the affection was extremely rebellious to treatment, and lasted from several months to two years.

The same author (*Loc. Cit.*, p. 236) has also described a dry form of the disease. In these cases a very similar condition was present, but the inflamed part remained dry throughout. A history of lues could not be excluded in any of these latter instances, although anti-syphilitic treatment had no effect whatever upon the lesions. Crocker concluded that the disease was due to a peripheral neuritis, with secondary parasitic invasion. He named it *dermatitis repens*.

In 1897, Hallopeau (*Ann. de dermat. et de syph.*, 1897, pp. 473 and 1277) reported several examples of a disorder which resembled dermatitis repens in many respects, but which he believed to be a separate and distinct malady. The disease was usually confined to the extremities, although secondary lesions sometimes developed from new foci on other parts of the body, no region being exempt. Hallopeau distinguished vesicular, bullous, pustular, and mixed types, according to the character of the predominating inflammatory manifestations. He claimed that it differed from the disorder described by Crocker in several essential particulars: the primary lesion never extended beyond the hand or foot, the secondary eruption usually developed symmetrically and might affect any part of the body, and the inflammatory process was sometimes kept up indefinitely by recurrences at the same point. To the condition he gave the name *acrodermatites continués* (*acrodermatitis perstans*, or a persistent dermatitis of the extremities).

At various times during the past two years I have had under observation three cases of chronic, spreading dermatitis of the extremities, two of which closely resembled the moist type of dermatitis repens described by Crocker, and one which presented the clinical features of the vesicular variety of Hallopeau's *acrodermatitis perstans*. These cases were seen in the combined practice of Dr. Kanoky and myself, and I am indebted to him for permission to publish the reports. Unfortunately, the photographs and sections from the first two patients were accidentally destroyed by fire, only the histories, and notes of the pathological findings being saved.

CASE 1. J. H. H.; male; married; farmer; forty-one years of age; referred to me by Dr. Jesse Barker, of Chanute, Kansas.

FAMILY AND PERSONAL HISTORIES; negative.

HISTORY OF PRESENT CONDITION. The disease followed a slight scratch wound (from the toe-nail of a chicken) on the dorsal surface of the second finger of the left hand. Two days after the injury was received, a pustule developed at the site of the wound. This was opened and drained, and a moist antiseptic dressing applied. The finger was swollen, considerably reddened, and quite painful during the first ninety-six hours, then the swelling gradually subsided, and the lesion became practically painless. The inflammatory process continued, however, despite continuous treatment. The orig-

inal wound healed in the course of a week, but the epidermis that formerly covered the part had sloughed, leaving an irregularly rounded opening about 1 cm. in diameter. The margin of this aperture consisted of a loose, frayed collar of epidermis, undermined for a distance of 5 cm. and surrounding its entire circumference was a clouded serous exudate. The affected area slowly extended by a continuation of the inflammation at the border. Laterally the process was limited by the thickened palmar epidermis, beyond which it did not extend and anteriorly, it stopped at the matrix of the finger-nail, but posteriorly, it slowly continued along the dorsum of the finger and hand until the wrist was reached. On the hand the affected surface was considerably broadened, and ultimately a racquet-shaped area, 20 cm. long and about 6 cm. wide at the base (near the wrist), resulted. As the inflammation extended, the denuded derma, which at first was dotted with dew-drop-like collections of freshly exuded serum, became glazed and dry, and, in the course of a few weeks, gradually regained its former epidermal covering. There was no tendency to reinvolvement of a part after it had once been affected, and new territory was attacked only by direct extension.

**HISTOPATHOLOGY.** Under cocaine anæsthesia, the solution being injected subcutaneously, a diamond-shaped piece of skin, .4 by .7 cm. in size, was removed from the border of the lesion, at a point just back of the second knuckle. This tissue was fixed in alcohol, and mounted in celloidin. Serial sections were cut, and stained with methylene blue (Unna-Pappenheim), hæmatoxylin-eosin, and Gram-Weigert. For the differentiation of elastic tissue, Weigert's fuchsin-resorcin mixture was used. The papillæ were somewhat swollen, and the blood vessels were slightly increased in size, with an occasional area of perivascular infiltration (polynuclears and small round cells). In the corium, only the upper portion was affected, and the transitory changes present in that region gradually disappeared as the sound skin at the periphery was reached. The inflammatory process was confined almost entirely to the granular layer. Above, it appeared to be limited by the stratum lucidum, while below, it extended almost to the rete Malpighii. The inflammatory changes consisted, for the most part, of a series of minute abscesses, situated between the prickle cell layer and the stratum lucidum. These cavities were partly filled with broken down epidermal cells and débris, and, in the Gram-Weigert sections, masses of cocci could be seen.



There was œdema of the cells comprising the mucous layer. The elastic tissue was normal in amount and distribution.

CASE 2. J. K.; male; married; contractor; thirty-eight years of age; referred to me by Dr. J. H. Laning, of this city.

PERSONAL HISTORY. This was negative, as was also the cutaneous history of the family.

HISTORY OF PRESENT CONDITION. The disease began as a small blister in the nail-fold of the second toe on the left foot. The patient could not recall an injury or wound of any kind. The lesion was opened, and an antiseptic dressing powder applied, but, despite treatment, the border of the affected area gradually extended backward, on the dorsum of the foot, for a distance of 10 cm. or more. Then the involved surface, which had been quite narrow up to this time, became broadened, at a point just over the metatarso-phalangeal articulation, and gradually extended over the second and third toes also. Five weeks after the appearance of the disease on the left extremity, the third toe on the right foot was attacked. The disease progressed in a manner exactly similar to that on the opposite side, although the process was limited to the skin on the dorsal surfaces of the first and second digits, together with an adjoining area, about 3 by 5 cm. in extent, on the dorsum of the foot.

When I first saw the patient, the disorder had been present nine weeks, and, on both extremities, the borders of the lesions showed signs of active inflammation, with constant increase in extent of the involved area.

A biopsy was not allowed at first, and as the character of the patches was soon considerably altered by treatment, permission was not requested later. The patient had some peculiar keloidal masses (that had followed acne pustules) on his chest, however, and, just before the case was discharged as cured, consent to remove one of the nodules for microscopical examination was secured. I had treated the toes only a few minutes previously, and, in my haste to remove the little growth before the patient might change his mind, my surgical technique was faulty, and the biopsy wound became infected. Twenty-four hours later, the margin became reddened and swollen, and two days after this, a typical attack of dermatitis repens had set in. The process continued for about three weeks, and involved

an area 8 by 10 cm. in extent. It finally subsided under constant and vigorous treatment.

**HISTOPATHOLOGY.** The skin immediately surrounding the ke-  
loid was carefully examined for structural or other defects, but, ex-  
cepting for the stratum lucidum, which was somewhat thicker and  
more sharply demarcated than usual, none was found. The elastic  
tissue was apparently normal, both in amount and distribution.

**CASE 3.** J. S.; male; single; freight brakeman; twenty-four  
years of age. This patient was an employee of the Missouri Pacific  
Railway Company, and was referred to Dr. Kanoky, but was also  
under my care.

**FAMILY HISTORY:** negative.

**PAST HISTORY.** The patient had had one attack of gonorrhœa,  
but denied ever having had syphilis.

**HISTORY OF PRESENT CONDITION.** The disease followed a splin-  
ter wound of the left thumb. The injury appeared to be slight, and  
very little attention was paid to it at first, but the lesion slowly  
spread until the affected area measured 2 by 5 cm. About one  
week after the onset of the disorder, a similar condition developed  
on the second toe of the right foot. Two weeks after this, a third  
area, on the outer side of the left forefinger, became involved. At  
about this time, a lesion also appeared on the inner surface of the  
right instep, and another a few centimetres below the right internal  
malleolus. Two corresponding patches developed on the instep and  
ankle of the left foot, but neither of these ever became very extensive  
and the toes on this foot were not attacked at any time. None of  
the denuded areas healed completely. The freshly exposed surfaces,  
instead of remaining smooth and gradually becoming tougher and  
less sensitive, grew scaly and rough, and occasionally one or more  
vesicles would develop beneath the newly formed epidermis. This  
feature was particularly marked in the lesions on the second toe of  
the right foot and on the left thumb. When the patient was first  
seen, the disease had been present for five and one-half months. For  
over four months of this time it had been under treatment.

**HISTOPATHOLOGY.** After blocking off the area with Schleich's  
solution, a portion of the actively inflamed margin was excised from  
the lesion on the right instep. The specimen was fixed in alcohol,

and mounted in celloidin. For staining purposes, methylene blue, hæmatoxylin-eosin, eosin-methylene blue, Gram-Weigert solution, and Weigert's mixture were employed. There was present a slight hyperkeratosis. The stratum lucidum was sharply outlined, and thicker than normal. In the affected area, this layer was torn loose from the underlying cells, and pushed upward, like the hinged lid of an opened box. The free margin was frayed and broken. The granular layer was the seat of numerous vesicles, some of which had broken through the thin wall of overlying cells, and allowed the contents to escape on the surface. The cells surrounding these cavities were irregularly arranged, and the innermost showed fragmented nuclei and other degenerative changes. The prickle layer was somewhat thickened, and the constituent elements were swollen and œdematous. A few "balloon" forms were present, and many of the more superficial cells contained bacteria. The cells of the mucous layer were swollen, but normal in number and arrangement. The papillæ, also, were increased in size, and numerous leucocytes were to be seen in the neighborhood of the capillaries. No mast cells were found. There were some inflammatory changes in the subpapillary region, but they were not pronounced in either degree or extent. No bacteria were found below the granular layer. The elastic tissue was unaffected.

**BACTERIOLOGICAL FINDINGS.** Six tubes of culture media (two each of agar, glycerin agar, and blood serum) were inoculated from freshly exuded serum collected from the exudate at the margins of the two lesions on the inner surface of the right foot. Of these, four developed pure growths of a pale yellow staphylococcus that was found to possess the morphological, cultural, and staining characteristics of the aureus; one showed the presence of a similar organism, together with a short streptococcus (two to five cocci to the chain); and on the sixth was found a yellow staphylococcus and an unrecognized yeast fungus. Ten days afterward, four more tubes were inoculated. A staphylococcus similar to the one isolated at first grew on three of the slants, the fourth remained sterile.

**ANIMAL EXPERIMENTATION.** On Oct. 26, 1910, two adult guinea pigs were inoculated with the staphylococcus from the cultures. The bacteria were rubbed into the uninjured or slightly lacerated skin at various points, the hair being left normal (and marked with ink), clipped short, or shaved off. Inflammatory lesions, consisting of minute vesicles and pustules, developed on only three of the eleven

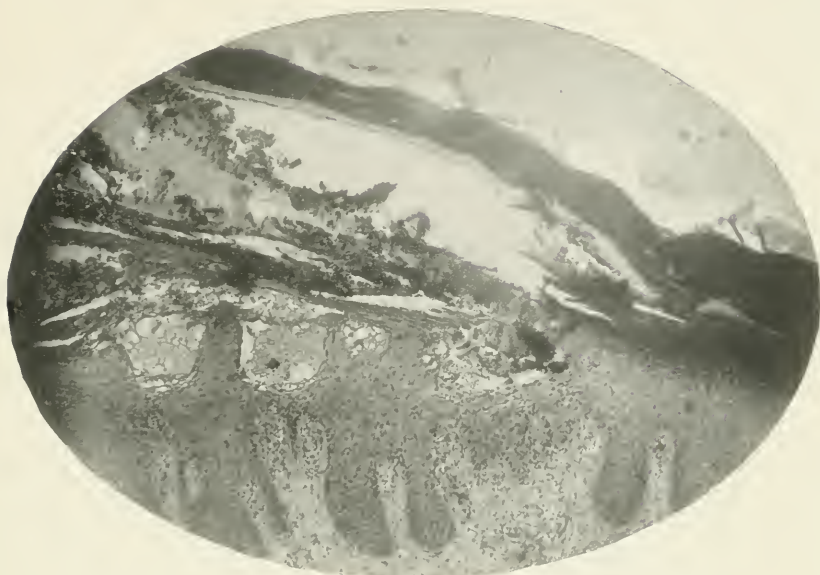


Fig. 1.

Dermatitis Repens.

Showing exfoliation of corneal layer, epidermal abscesses and infiltration in papillary layer. Spencer 1-4 obj.; no ocular.



Fig. 2.

Dermatitis Repens.

Lesions on finger and thumb of left hand.



Fig. 3.

Dermatitis Repens.

Lesions on inner surface of right foot.





areas treated, but none of them resembled the manifestations of acrodermatitis perstans in the least. From two of them, however, pure cultures of the staphylococcus were regained. Owing to the anatomical differences that exist between the skin of man and that of the guinea pig, it is very probable that one could not bring about a typical attack of acrodermatitis perstans in the latter animal under any circumstances. The ideal method would be to inoculate a sound area on the patient's skin, as was accidentally done in Case 2, and then carefully follow up and note the results. Unfortunately, the last patient would not consent to this procedure, under any consideration, and so the opportunity was lost.

**TREATMENT.** The first patient was treated along the lines usually recommended for combating dermatitis repens (potassium permanganate, silver nitrate, iodoform, mercury and sodium hyposulphite). The X-rays also were tried, but without appreciable benefit. At the end of seven weeks the disease was under control, and the patient returned home. In a recent letter, he states that there has been no recurrence.

The second case, which had proved very resistant to the measures commonly employed in dealing with suppurating wounds, was treated with a solution of salicylic acid (1.0) and tannic acid (5.0) in alcohol (50.0), a valuable mixture originally recommended by Ruggles (*Jour. Cutan. Dis.*, 1909, p. 105) for use in chronic eczema of the toes. In addition, a dose of stock vaccine, containing four hundred million staphylococci (aureus, albus, and citreus, combined), was given once each week. The result was very gratifying, and the lesions on the feet were completely healed at the end of seventeen days.

The third patient was placed upon the same line of treatment. There was marked improvement at first, and some of the lesions were entirely cured, but others, and particularly the one on the thumb and the one on the toes of the right foot, persisted for several weeks after the others had disappeared.

**CONCLUSIONS.** The pathological findings in the first and third cases here reported were so very similar that it would not be possible to differentiate one condition from the other by means of the microscope. Some of the lesions seen in the case of acrodermatitis perstans were clinically indistinguishable from those observed in the

cases of dermatitis repens. It is unwise to generalize from inadequate data, but I believe the evidence is sufficient to warrant the inclusion of the two varieties of the disease described by Crocker, and the four types of the disorder described by Hallopeau under the designation of *dermatitis repens*.

With regard to the aetiology, it would appear that the disorder is due to a specific organism, probably some particular strain of the staphylococcus pyogenes aureus or albus.

The slight deviation from normal noted in the lower layers of the corium in all three of these cases also may be of some significance, inasmuch as an increased resistance on the part of this stratum might lead to a more extensive destruction of the granular layer by preventing the escape of the products of an inflammatory process situated in that region.

The occurrence of a typical outbreak of the disease on the chest, following accidental infection from a lesion on the foot, is almost conclusive evidence that no trophic factor is involved.

The fact that the disease attacks the hands and feet more often than other parts of the body is easily accounted for when one considers the very great frequency with which these members are exposed to slight injuries and infection.

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### A CASE OF LICHEN PLANUS BULLOSUS.\*

By J. W. MILLER, M.D., Cincinnati.

Instructor in Dermatology in the Medical Department of the University of Cincinnati.

THE relative frequency with which lichen planus is encountered among skin diseases of the United States is given in the statistics of the American Dermatological Association as .439 per cent. The pemphigoid or bullous form of lichen occurs even less frequent, for the returns of the above Association fail to record a single case for the past few years, and from memoranda of cases in the public and private practice of my colleagues only one case is recorded.

PATIENT. Miss L.; teacher; forty years of age; was referred to me by Dr. E. H. Moss of this city, in July, 1910.

\*Read before the Section on Specialties, Cincinnati Academy of Medicine, Feb. 6, 1911.

**PERSONAL HISTORY.** The patient was born in the United States and has been a resident of this city all her life. She is single, weighs 147 pounds, and is five feet eleven inches in height. She had diphtheria when a child. Since reaching adult life she has suffered from middle ear disease, and an arthritis of the knees, both conditions yielding after months of treatment.

**FAMILY HISTORY.** Her mother died of cancer of the breast; her brother of heart disease and a sister from diphtheria.

**Present Illness.** In May of last year, the patient noticed, on the backs of the hands and forearms, a few scattered papules, bright red in color, which caused some itching and showed a tendency to persist despite soothing lotions containing resorcin and mild ointments. The papules gradually increased in number and in size, showing no tendency to group, with the exception of a patch occurring on the back of the right hand, about the size of a silver half dollar.

**EXAMINATION.** The patient is tall, somewhat under weight; the skin of the face is clear. The trunk shows no lesions; the lower extremities, with the exception of a few papules about the ankle of the right foot, are free from eruption. The pupils react well to light; the lungs are clear; the pulse strong and regular. The urine has a specific gravity of 1010, light yellow in color, acid reaction, and contains neither sugar, albumin, nor indican. The microscopical examination of the urine revealed a few bladder epithelial cells and some uric acid crystals. A blood examination made by Dr. Jos. T. Kennedy shows: Red cells, 4,072,500; hemoglobin, 90 per cent; leucocytes, 3,400; differential count; polymorphonuclears 62.5 per cent., large lymphocytes 12 per cent., small lymphocytes 20 per cent., eosinophiles 5 per cent., transitional forms 0.5 per cent. From this examination we note a very low white count and a slight increase in the number of eosinophiles.

At this time the forearms were the parts most involved. The papules were pinpoint to pinhead in size, and scattered for the most part. Grouped on the back of the right hand a patch about an inch in diameter was to be seen, in which the papules were so closely aggregated that all characteristics were lost. The patch appeared as a slightly elevated lesion, pinkish red in color, showing exaggerations of the lines of the skin. The color of the papules might be described

as bright or pinkish red, and a careful examination showed no umbilication of papules. Many appeared slightly flattened. A few extremely minute vesicles capped the lesions, and several pinpoint vesicles were observed on the apparently normal skin. The patient volunteered the information (not a direct question) that itching while not severe was always worse at night. Further questioning brought out the fact that she slept with a sister, but this relative was free from any cutaneous disease. Scabies was suspected, but a long search for the cuniculus was unsuccessful.

True, it is not always possible to find the itch mite, and the diagnosis has often to be made simply from the account of itching (most marked at night), the history of the case and the distribution of the lesions. Papular eczema (lichen simplex, of former authors) was also considered. The flexor aspects of the limbs are common sites of the papular form of eczema. It may be encountered elsewhere, but is rather uncommon on the hands. The color and shape of the papules, with occasional apex vesiculation as above described, would hardly lead us to believe we were dealing with an unusual type of lichen planus. The text-books tell us that "lichen planus is a dry disease throughout, and the lesions are papular and not vesicular" (Stelwagon<sup>1</sup>), "Papules of lichen planus never change into vesicles" (Fox<sup>2</sup>). What leads to confusion and at the same time contradicts the above statements, appears in Johnston's translation of Kaposi<sup>3</sup>: "The alterations on which the process is based may at times come into the foreground in so prominent a manner as to change the clinical picture in a way that would confuse the observer by the occurrence of an atypical form. The hyperemia causes an acute extensive effusion of serum and hence the formation of isolated or numerous vesicles (lichen pemphigoides)." Pusey's<sup>4</sup> observations coincide with the above: "At times the lesions of lichen planus vary from their typical flat angular character. In rare cases, while most of the lesions are of the typical character of lichen planus, vesiculation occurs upon the summits of some of the lesions. This very rare occurrence of vesicles in lichen planus is the only departure of these lesions from their solid character."

In the case under consideration, when first seen, the papule was rounded, discrete, not angular nor umbilicated, and with little tendency to form patches. It was bright red in color instead of the dull red with a purplish or lilac tinge, as seen in typical lichen planus papules. This picture, with an occasional minute vesicle, as above

described, was confusing. The patient was given a ten per cent. sulphur ointment. About this time she left the city on a vacation. On her return she reported promptly for examination and it was found that all the symptoms were aggravated. I asked for consultation and permission was granted. I had the privilege of the opinion of Dr. A. Ravogli who, after careful observation, pronounced the condition lichen planus bullosus, in which diagnosis I concurred. The characteristic lichen papules and patches were now more evident. The extremities as well as the body were involved. The vesicles ranged in size from pinhead to pea-sized and larger and for the most part, were rounded. An oblong lesion, the size of two navy beans placed endwise, appeared just above the bend of the right elbow. Another large bulla, the size of a twenty-five cent piece, occurred near the right ankle. "As a rule the number of vesicles and bullæ is small, although in Kaposi's<sup>5</sup> case (plate 171 in his Hand Atlas) they are extremely numerous, even masking the lichen condition for a time." (Crocker.) The contents of the vesicles were opaque, a few were hæmorrhagic, flabby in structure and ruptured easily, leaving a shriveled and milky-white pelicle or a raw excoriated surface. According to Crocker "the occurrence of bullæ in lichen has long been recognized in England. Morrant Baker's case occurred in the early eighties. Although lichen planus is essentially a dry inflammation of the skin, in exceptional cases bullæ occur as a complication. In a majority of instances, patients have been under treatment for some time and have had arsenic administered, and the question arises whether the arsenic is an ætiological factor in the production of the bullæ?"

No arsenic was administered in the case under discussion until long after the appearance of the blebs. Cases are on record in which arsenic has not been given; however, Crocker inclined to the belief that arsenic was an important factor, for he further states that "While arsenic is not an essential factor in the production of bullæ it may be a predisposing cause, as it is now known to be for herpes zoster, although numerically only responsible for a small number." Whitfield<sup>6</sup> reports seventeen cases of this complication in which nine had no arsenic before the appearance of bullæ. Lusk<sup>7</sup> reports a case independent of arsenic. Sequeira<sup>8</sup> mentions the early occurrence of bullæ before arsenic had been taken.

From these reports we can safely say that the bullous form of lichen planus occurs independently of the use of arsenic. Allen<sup>9</sup>



strongly insists: "That vesicles and bullæ may be at times an essential part of the process designated as lichen planus and not a mere accidental or complicating form." The last named author quotes Brocq, who says, "Bullæ may complicate the disease and a variety of lichen is mentioned in which, especially when the general condition of the patient is not good, pemphigoid bullæ appear here and there, disseminated upon preëxisting lesions or even upon healthy skin." Kaposi<sup>3</sup> writes, "In a few cases I saw pea-sized and larger vesicles occur together with the newly developing lichen nodules; others (Unna, Hebra, Hallopeau, Lavergne, Róna) observed them upon nodules undergoing involution, so that for some weeks the appearance might resemble pemphigus."

**HISTOPATHOLOGY.** A section of skin for histological study was refused, but as the findings of various investigators correspond I will only quote from the recent excellent work along this line by Fordyce<sup>10</sup>. In regard to the bullous form he says, "A rather frequent concomitant of the lichen process is the subepidermic vesicle, more rarely the intra-epidermic one. The former has been looked upon as an artifact and has had various other causes assigned to it. Caspary attributed these subepidermic lacunæ to degeneration and disappearance of the subepithelial connective tissue; Török to loss of cohesion between the epidermis and corium; and mechanical separation. Joseph to destruction of a part of the basal layer and adjoining rete; Unna included colloid degeneration of the prickle layer and hyalin degeneration of the cutis with partial resorption. The most probable theory is that they are due to the serous exudation at a point where the latter is most intense or the resistance of the epidermis is lowered. Vesicles in the epiderm may be accounted for in the same way. With œdema as a part of the early process, vesicle formation would not be inconsistent even at the beginning of papule formation. In Hebra's opinion they were a mark of involution, and only appeared in the regressive stage of the disease. The action of arsenic has been called in question, but that vesicles occur independent of this drug is supported by numerous instances. The subepidermic vesicles or lacunæ are usually empty; the contents of the intra-epidermic ones have been described as fibrin, lymphocytes, leucocytes, and eosinophiles as high as twenty per cent. in Whitfield's case."

Allen<sup>9</sup> makes a just plea that the above clinical facts should serve to modify text-book considerations. "It does not seem quite



Fig. 1.

Lichen Planus Bullosus.  
Lesions on ankle.



Fig. 2.

Lichen Planus Bullosus.  
Lesions on forearm.



proper to state as the books do that the papules persist during the whole course without even becoming transformed into other lesions of a greater degree of efflorescence or that they accomplish in all instances their whole evolution under the aspect of papules."

PROGNOSIS. "The presence of bullæ apparently has no bearing on the severity of the prognosis of the disease" (Whitfield).

ÆTIOLOGY. Walker's<sup>11</sup> suggestion, "That before long lichen planus will find its resting place along side of the infective granulomata, and investigators would do well to search for an organism analogous to the spirochæta of syphilis" is of interest, especially at this time.

TREATMENT. In the treatment of lichen planus, preparations of arsenic and mercury have proven very satisfactory. In this country arsenic is usually given as Fowler's solution, and in Europe, in pill form (the well-known Asiatic pill) for internal administration. At the suggestion of the consultant, twenty minims of a ten per cent. solution of cacodylic acid was injected into the muscles below the scapula every two or three days. Cacodylic acid, or dimethylarsenic (for chemical formula see Merck's 1907 Index) is formed from cacodyl and mercurous oxide in the presence of water. It is said to be far less toxic than the alkali arsenites. Within a short time improvement was very noticeable. Papules underwent absorption, vesicles drying up, and a decided increase in the weight of the patient occurred. The gastrointestinal tract must be rigorously conserved in these cases, therefore medication by the hypodermic method I believe to be the method of choice. Recently, the Ehrlich-Hata preparation has been tried with encouraging results. Bichloride of mercury, grain 1/12 three times a day, has proved the most efficacious remedy in the hands of Walker.<sup>11</sup> Lusk<sup>12</sup> was also impressed with the merits of the drug in lichen planus. External treatment is desirable in most cases. I derived the greatest satisfaction from the use of the bichloride-carbolic-zinc-oxide ointment as suggested by Unna.

CONCLUSIONS. 1. That vesicles and bullæ may be at times an essential part of the process of lichen planus.

2. Text-books describing lichen planus as a dry disease throughout, or that papules of lichen planus never change into vesicles, lead to confusion and such statements should be modified.

3. Vesicles occur independent of the administration of arsenic.

4. The administration of arsenical and mercurial preparations hastens involution, suggesting that the ætiological factor may be a spirochæta, or to some organism of that nature.

In closing I wish to express my sincere thanks to Drs. Ravogli and Heidingsfeld for courtesies shown me in the preparation of this article.

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Robertson Building.



## EOSINOPHILIA IN SCABIES.\*

By JOHN ALBERT KOLMER, M.D., Philadelphia.

Pathologist, Philadelphia Hospital for Contagious Diseases; Assistant Bacteriologist, Bureau of Health, Philadelphia.

THE following eighteen cases were studied during an outbreak of scabies in an institution for children. All were well-marked clinical cases and under treatment by means of hot baths and sulphur ointment. With the exception of scabies the children were otherwise healthy and represented the usual institutional type.

TABLE 1.

Number.	Name of Patient.	Age (years).	Leucocytes.	Lymphocytes.		Transitionals.	Polymorphonuclears.	Eosinophiles.	Mast Cells.	Duration of Scabies.
				Large.	Small.					
1.	H. McG.	6	14,500	27.67	10.71	1.78	54.39	5.35	.09	1 week.
2.	E. C.	5	7,100	29.5	7.	.5	56.4	6.5	.1	1 week.
3.	F. McD.	5	11,200	32.	2.	1.	57.	8.	.0	1 week.
4.	J. L.	5	10,000	38.	8.	2.	43.	9.	.0	3 weeks.
5.	Tony.	5	10,000	38.	6.	2.	49.5	4.	.5	3 weeks.
6.	J. G.	6	8,000	40.	13.	3.	41.	3.	.0	3 weeks.
7.	J. McC.	5	9,000	32.	8.	2.	55.	3.	.0	3 weeks.
8.	Albert.	5	9,500	23.	8.	1.	62.	5.	1.	6 weeks.
9.	Victor	4	14,600	38.	5.	2.	51.	4.	.0	6 weeks.
10.	F. G.	4	15,000	39.	9.	2.	43.	7.	.0	6 weeks.
11.	Clifford.	5	9,000	28.	6.	1.	60.	5.	.0	6 weeks.
12.	M. S.	5	16,000	34.	3.	1.	59.	3.	.0	6 weeks.
13.	M. F.	5	11,600	36.	5.	1.	55.	3.	.0	6 weeks.
14.	Andrew.	5	14,000	30.	8.	2.	48.5	11.	.5	6 weeks.
15.	Dominick.	3½	13,000	37.	3.	1.	50.	9.	.0	6 weeks.
16.	A. W.	3	12,400	38.	7.	1.	46.5	7.	.5	6 weeks.
17.	Biacco.	6	13,000	34.	7.	5.	43.	11.	.0	8 weeks.
18.	John.	5	14,500	29.	6.	3.	54.5	7.	.5	8 weeks.

During the first week the disease was characterized by a well-marked multiform eruption and numerous scratch marks. By the third and fifth weeks a few cases were practically recovered. The larger number, however, were quite refractory to treatment, suffered

\*Read before the Pathological Society, Philadelphia, Dec. 22, 1910.

with many relapses, and during the sixth and eighth weeks the lesions were well defined. The following table shows the average blood findings according to the duration of the disease:

TABLE 2.

Duration.	Leuco- cytes.	Lymphocytes.		Transi- tionals.	Polymor- phonu- clears.	Eosino- philes.	Mast Cells.
		Small.	Large.				
1st week.	10,900	29.73	6.57	1.09	55.93	6.61	.6
3rd week.	9,300	38.66	9.	2.33	44.5	5.33	.16
5th week.	9,000	32.	8.	2.	55.	3.	.0
6th week.	12,800	33.66	6.	1.33	52.77	5.	.7
8th week.	13,700	31.5	6.5	4.	48.75	9.	.25

Twenty-five control examinations were made from children of the same department and age and the summary of these is given for comparison with the summary of the scabies cases:

TABLE 3.

	Age (years).	Leuco- cytosis.	Lymphocytosis.		Transi- tionals.	Polymor- phonu- clears.	Eosino- philes.	Mast Cells.
			Small.	Large.				
Controls.	3½-5	10,800	27.67	9.06	.72	59.37	2.73	.15
Scabies.	3½-5	11,800	33.51	6.76	1.79	51.59	5.79	.18

The following will be noted:

1. The disease is accompanied by a mild leucocytosis, according to the degree of severity, which reaches normal as the disease is cured.

2. The eosinophiles are relatively and absolutely increased in a fairly well-marked degree. This eosinophilia probably bears a relation to the severity of the disease, being highest during the acme of the eruption, and gradually reaches normal proportions as the disease is controlled.

## SOCIETY TRANSACTIONS.

## NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting. January 24, 1911.

WILLIAM B. TRIMBLE, M.D., *President*.

## Congenital Syphilis. Presented by DR. WINFIELD.

The patient was a woman aged twenty-nine and a native of Long Island. She had had most of the children's diseases and up to sixteen years of age had enjoyed fairly good health. At that time a small ulcer appeared just over the knee; this was quickly followed by similar ulcers over other parts of the body, more numerous over the arms and legs; about the same time she began to complain of a discharge from the nose. These symptoms had continued with more or less severity. She presented the typical saddle nose and the arms were covered with scars; both knee joints were useless from ankylosis; the loss of cutaneous tissue with the scar formation had so bound down the muscles of the legs that the feet were greatly enlarged and deformed. A radiograph showed loss of bone with deformity. The patient's father was said to have died of tuberculosis, her mother was insane and one brother had some mental affection. Several Wassermann tests had been made and all were positive. Most of the treatment, before coming to the Kings County Hospital, was by ingestion, but the drugs used could not be ascertained. Dr. Winfield thought she might be a suitable case for salvarsan since her general condition was excellent.

Dr. Klotz said that the late appearance of symptoms in such cases of syphilis hereditaria tarda was not uncommon. Bone lesions would usually develop about the age of puberty. Years ago he had had under observation a girl of fourteen or fifteen, otherwise well developed, who had affections of the bones, periostitis and osteitis, on all four extremities.

## Necrotic Granuloma. Presented by DR. TRIMBLE.

The patient was a man, forty-six years of age, and the condition had existed for forty years. He was presented before the International Congress of Dermatology in 1907, and was now in about the same condition as then. The lesions first appeared on the buttocks when he was about eight years old. They were deep-seated nodules, which finally discharged, leaving scars, which varied from the size of a pea to that of a hazelnut. When presented there were very few active lesions, but the scars were very numerous, practically covering all the body. Pathology: The vessels were dilated and surrounded by lymphocytes, plasma cells, and

some polymorphonuclears; and there was an increase in fibroblasts. The sweat glands and follicles also were surrounded by cell infiltration.

Dr. JACKSON said that the name necrotic granuloma seemed to him to be better than tuberculide for this condition. The latter implied a tuberculous origin for the disease. Many cases did not appear to be of that nature, but due to some local infecting agent: though many others occurred in probably tuberculous subjects.

Dr. GEORGE HENRY FOX agreed with Dr. Jackson in regard to the proper term. Years ago Dr. Piffard, in accord with French writers, called the manifestations of syphilis "syphilides." He also called the manifestations of tuberculosis "tuberculides" both of which were very good terms. Since then, however, Darier used the term "tuberculide" for cases which were not a tuberculosis, and we had foolishly forsaken Dr. Piffard's original and excellent nomenclature and proved again that a prophet was without honor unless he happened to be a foreigner.

Dr. FORDYCE said that some years ago he had made sections from this case and examined them histologically. They did not show the structure of a tuberculide, but rather of an infectious inflammation of the sebaceous glands, which had extended to the surrounding tissues. The sections contained no giant cells.

Dr. ELLIOT said that the case corresponded to what used to be called *acne cæceticorum*. None of these cases was ever known to die of tuberculosis. If the man's condition began at eight years of age and he was now forty-eight, the idea of a tuberculide might be abandoned, unless one wished to follow the nomenclature of the men in Europe. He would call it anything rather than tuberculous.

Dr. TRIMBLE, replying to Dr. Jackson's suggestion, said that when he first presented the case he had used the term necrotic granuloma, but had mentioned tuberculide as a group name in which group necrotic granuloma was placed.

### **Erythema Induratum.** Presented by Dr. FORDYCE.

The patient, a young woman, eighteen years of age, was a laundress and on her feet all day. The lesions appeared two months ago and presented the appearance of Bazin's disease. They were symmetrically distributed, chiefly on the posterior surfaces of the legs, and dark purple in color. One of them had undergone necrosis. No tests had as yet been made to determine the condition and the diagnosis was merely a tentative one, as he had only seen the case that day. He intended to have the Wassermann and von Pirquet reactions made to clear up the diagnosis.

Dr. KLOTZ said that the lesions seemed unusually superficial. He had always understood that the lesions of erythema induratum were more or less subcutaneous, while these appeared to be mostly cutaneous.

Dr. SHERWELL agreed with Dr. Fordyce's diagnosis, and would call it Bazin's erythema induratum. It did not seem to him to be syphilis.

### **Sarcoma of the Jaw.** Presented by Dr. KINGSBURY.

The patient was a female imbecile, twenty-three years of age. She was of poor physical development and was a deaf-mute. The Wasser-

mann reaction was positive. About three months ago a small growth was found on the left side of the upper jaw, between the first and second molars. Six weeks ago some operation was performed for its removal, but three weeks later it re-appeared. Since then it had been growing rather rapidly and had caused considerable pain and discomfort. When presented, the tumor was quite hard and was about the size of a walnut. An X-ray plate was of negative diagnostic value. The case was to be operated upon within a few days.

DR. ELLIOT suggested that it might be an osteosarcoma or, as it was termed, a giant cell sarcoma.

DR. FORDYCE said that the condition in his opinion was a myeloma or giant-celled sarcoma, starting from the superior maxilla. These tumors were locally malignant but seldom metastasized. It was similar to one which he had reported involving the terminal phalanx of one of the fingers. In this instance, amputation of two of the phalanges was made and resulted in a cure.

DR. TRIMBLE recalled a case that he had had under observation—a giant-celled sarcoma of the end of the thumb, somewhat similar to the one spoken of by Dr. Fordyce. He amputated the thumb and it was discovered that the tumor started in the bone or periosteum. The case was followed for a year or more, but was finally lost sight of.

#### Case for Diagnosis. (Ulcerating and Crusted Lesions on the Nose and Cheek). Presented by DR. GEORGE HENRY FOX.

The patient was a boy, seven years of age. There were three other children in the family, all perfectly healthy. The diagnosis would seem to lie between syphilis and tuberculosis. There was also a lesion in the roof of the mouth. Dr. Fox said that he had made his own diagnosis but presented the case for further opinion concerning it.

DR. WHITEHOUSE said that he would not venture upon a diagnosis without further investigation. The general appearance of the lesion would favor a specific cause, although the history of an operation behind the ear would make one think that possibly it might be tuberculous in origin. Further investigation, with the aid of the Wassermann and von Pirquet tests would doubtless clear up the diagnosis.

DR. ROBINSON said that in spite of the marked enlargement of the nose, the absence of a primary lesion outside of the sharply limited mass of pathological tissue, lesions almost invariably present in lupus vulgaris, he would make the diagnosis of a tuberculous process, rather than syphilis, on account not alone of the clinical history as regards duration of disease, but also from the boggy feel and vascular condition present.

DR. JACKSON said that the case impressed him as being one of syphilis rather than of lupus. While it might be tuberculosis of the skin, it was not lupus. It lacked the outlying tubercles of lupus; there was at the upper edge a sharp-cut ulcer of rounded shape, and at the corner of the mouth a crusted ulceration, both of which were strongly suggestive of syphilis. The disease had involved a very large surface in a comparatively short time. Lupus would probably have been



slower in its spread. The case might be placed in the group of scrofulides, if it were not syphilis. A Wassermann test, or a vigorous course of anti-syphilitic treatment would throw light on the diagnosis.

DR. WINFIELD said that from a superficial examination he would consider it a tuberculous rather than a syphilitic condition.

DR. HOWARD FOX considered the case to be clinically one of tuberculosis. A negative Wassermann reaction which he had found in this case was strongly in favor of this diagnosis.

DR. SHERWELL thought it looked more like lupus than syphilis.

DR. FORDYCE said that the case impressed him as being lupus. He had seen tuberculous granulomata in children without the outlying tubercles of which Dr. Robinson had spoken. He then cited a case which had developed a large granuloma near the mouth which went on for years. Now it was a typical case of lupus involving almost the entire face and the diagnosis could not be mistaken.

DR. TRIMBLE said that when he first saw the boy he was inclined to the diagnosis of syphilis, but the result of the Wassermann test was rather strong evidence against that; however, the patient might have been previously treated for lues.

The speaker told of a patient under treatment with active lesions on the tongue and some on the arm. He had been under vigorous treatment for four or five months, and all the symptoms had disappeared except the ones mentioned above and he gave a negative Wassermann, but he had had very active mercurial treatment. He still had some lesions.

DR. JACKSON inquired if "606" had been tried in any of these tuberculous cases, and Dr. Trimble replied in the negative, in so far as the Skin and Cancer Hospital was concerned.

DR. FORDYCE said that he had given "606" to tuberculous cases with favorable results. One patient had tuberculosis of the lung and syphilis, and after an injection of "606" gave a negative Wassermann and gained in weight. The treatment seemed to have a favorable effect on the tuberculous process unless too far advanced.

DR. GEORGE HENRY FOX said that the case had not changed in appearance during the last week. The scar tissue and the ulcerations at the angle of the mouth, on which he placed less importance than others, were strongly suggestive of syphilis, but the majority of the men at the clinic thought it was tuberculosis and from the present clinical appearance he would agree with that diagnosis. He disliked to use the term lupus in such a case and would prefer the old name of scrofuloderma. It bore no resemblance to typical lupus, and he would not speak of lupus in connection with it, but would call it tuberculosis cutis. The tuberculin test had not yet been made.

**Morphœa.** Presented by DR. KINGSBURY.

The patient was a Swedish woman, twenty-four years of age. On the back of her neck she presented a triangular-shaped lesion three inches in height and two inches wide at the base. This she stated was of two years' duration. The capillaries at the base of the patch were consider-

ably dilated. The Wassermann was positive, though the reaction was not as strong as that usually obtained in well-marked lues.

DR. ROBINSON suggested a tuberculin test as it had been argued by some that scleroderma was frequently associated with tuberculosis and considered to be a tuberculide. With this view, however, Dr. Robinson did not agree.

#### Parapsoriasis and Follicular Keratosis. Presented by DR. FORDYCE.

The two patients were brothers. One of them had been presented before the Society at a previous meeting with a persistent scaling affection involving the trunk and extremities which had existed for seven years. All the members concurred in the diagnosis of parapsoriasis. His brother, a boy about fourteen years of age, presented a condition of follicular keratosis which had existed about a year. The eruption was usually confined to the legs, but recently it had become quite generalized. The boy with the parapsoriasis stated that his eruption originally had been like that presented by his brother.

DR. WHITEHOUSE said that the larger boy had clearly a case of parapsoriasis, but that he could not say what the condition in the other was. It seemed to be a keratosis pilaris which might develop later into a parapsoriasis, but he would not call it parapsoriasis at present.

DR. JACKSON objected to the name parapsoriasis for cases of this kind. The condition was a chronic parakeratosis, and he could see no resemblance to psoriasis. The younger brother had a keratosis pilaris, and as the two conditions were closely related he would expect that the younger brother would in time develop the same condition as his older brother.

DR. FORDYCE said that the appearance of two such cases in the same family, one of which had lasted for seven years and the other an allied condition, would suggest that they were both due to some congenital error in the formation of the horny layer.

#### Serpiginous Syphilis Treated with "606." Presented by DR. TRIMBLE.

The patient, a woman thirty-five years of age, presented one of the brilliant results obtained by treatment with "606." A photograph was presented showing the case before the injection, the patient showing the condition after the treatment. She was given 6/10 gm. by intramuscular injection. The lesion was practically healed in three weeks.

#### Pustulo-Crustaceous Syphilide Treated with Salvarsan. Presented by DR. HOWARD FOX.

The patient was a man nineteen years old who had been infected about a year previously. He had taken mercury by mouth for about eight months but the disease had not been controlled by the treatment. He was given an injection of salvarsan (0.4 gm. in suspension) in Dr. George Henry Fox's service at the Skin and Cancer Hospital. A month

after the injection the Wassermann reaction had become weakly positive and lesions upon the nose, ear, arm, and legs had nearly healed. The eruption then relapsed and a second injection of 0.45 gm. in solution was given. This was followed by gradual healing until three days ago when a second relapse occurred.

**Gummatous Ulceration of the Palate Treated with Salvarsan.** Presented by DR. HOWARD FOX.

The patient had been shown previously on Nov. 22, 1910, by Dr. George Henry Fox. The patient had suffered a severe relapse shortly after being presented and on Dec. 15, 1909, was given a second injection of 0.6 gm. in solution. This was followed by improvement, although at the end of three weeks there was a second relapse.

DR. FORDYCE said that the relapse which had occurred in two of the cases presented, in spite of the repetition of the dose, was not an argument against the efficiency of salvarsan in the disease, but rather was an indication that our methods of using it had not yet been perfected. The dose which could be tolerated and the dose which was given were still far apart, and it might be that we would eventually demonstrate that the drug might be given in much larger doses than had been the custom in the past. His impression was growing that after the administration of a second dose of salvarsan, mercury should be given in an intensive way. At present he was employing the drug, wherever practicable, by the intravenous method and repeating it at the end of a week or ten days. He had given it now in about twenty cases in this manner and had seen no symptoms which were alarming. In one case he had noticed a marked rise of temperature. In this patient a decided chill occurred within three hours after the administration of the drug followed by a temperature of 105°. The following day the temperature was normal. In this particular case the patient had an initial lesion and the early secondary eruption. It was possible that the release of a large quantity of endotoxins was responsible for the sharp reaction.

In another case which he treated intravenously, at the time of the administration of the remedy, the patient complained of intense pain and the next day a marked swelling of the arm was found. This was hot, brawny, infiltrated and persisted for nearly two weeks. At the time the needle was inserted the patient became faint; possibly the slowing of the circulation from the cardiac weakness gave rise to a thrombus which produced the condition in question.

In several other cases he had noted a slight thickening of the vein for several inches above the insertion of the needle. In the majority of cases treated there was very little reaction, no pain, and the great comfort of the patient following the injection led him to think that this method would be one which would decidedly grow in favor.

DR. WINFIELD told of an interesting case which had been treated with salvarsan. In November the patient had developed secondaries, and did well for two weeks. The eruption disappeared, but the chancre, which was of the mixed type, did not seem to change. Two weeks later he developed an axillary abscess which was incised and the pus evacuated. Two weeks later—four or five weeks after the injection—he developed a chill, and a high fever (105°), lasting for two or three days. He had all the symptoms of malarial fever—he had come from some malarial district. His syphilitic symptoms had entirely disappeared. He was

treated with quinine, and his temperature subsided, and then he developed another chill. He was then examined for the plasmodium, which was found. Evidently, the salvarsan had little effect on the malarial organisms except to stir them up. The man had no symptoms of malarial infection when admitted to the hospital.

DR. GEORGE HENRY FOX said that he did not think that one case of unusual symptoms should decide against the use of a remedy. When one remembered that a dose of quinine or salicylic acid might be given to 999 persons out of a thousand, and the thousandth case present some unusual manifestations, it was not strange that a large dose of arsenic given in a number of cases should exceptionally produce surprising and undesirable symptoms. If the case did not result fatally these occasional symptoms should not be regarded as a general contraindication to its use.

DR. HOWARD FOX said that he and Dr. Trimble had not as yet given any intravenous injections. He had, however, seen a bad result similar to that which Dr. Fordyce had mentioned. The patient who had been given an intravenous injection eleven days previously, presented a brawny and somewhat painful induration at the bend of the elbow. The arm was somewhat stiff and there was slight necrosis at one point. The speaker stated that a case of nodular leprosy had been given an injection of salvarsan at the Skin and Cancer Hospital. It had not produced the slightest effect upon the lesions and the general condition had become very much worse after the treatment.

DR. KLOTZ said that Schreiber had distinctly stated that if during the intravenous injections the slightest pain occurred, it was a sign that the needle was not in the vein but either in its wall or in the surrounding tissue. Under such circumstances an intense local inflammation might take place. This might have been the case in the instance mentioned by Dr. Fordyce.

DR. SHERWELL said that arsenic was supposed to have a good deal of curative influence in malarial troubles, and academically one would think that it should have had a good effect on the patient, and a bad effect on the plasmodium.

DR. GEORGE HENRY FOX said that in Dr. Trimble's case, the injection of salvarsan had been followed by speedy improvement but when the relapse came, it came with remarkable rapidity. If the ulceration had been healed by mercurial treatment, it might have relapsed in time but it would have been months before this would have occurred, while after the injection of salvarsan the relapse took place in three or four weeks.

DR. KLOTZ said that he did not think that in Dr. Fox's second case a relapse had necessarily to be assumed. If necrosis of bone had once taken place the local process would and could not stop immediately. The salvarsan could not have any influence on dead bone and the natural process of elimination would go on until the necrotic bone was entirely freed from its surroundings.

DR. GEORGE HENRY FOX said that Dr. Klotz was right and that it should not be regarded as a relapse but as a continuation of the destructive process.

#### REPORTS UPON NEW CASES

**Syphilitic Epilepsy. *Filaria Sanguinis Hominis*.** Reported by DR. WINFIELD.

The first case reported was one of syphilitic epilepsy with tertiary cutaneous lesions. He gave salvarsan to this patient at the request of the

attending neurologist. The salvarsan was suspended in oil and given subcutaneously between the shoulders; there was but little local pain, and no temperature. For two days nothing occurred, then the patient developed a very severe epileptic convulsion which lasted for a long time followed by a stuporous condition of two days' duration. A week later she was confused and unable to express herself clearly. In the meantime the cutaneous lesions had practically disappeared. The speaker said he intended giving this patient another dose of salvarsan and expressed great hopes of an ultimate cure of the nervous condition, in which he was encouraged by the neurologist having the case in charge.

The second case was one of *filaria sanguinis hominis*. The patient was a native of British Guiana, although she had not lived there for five years. In November she entered Dr. Pilcher's private hospital suffering from chyluria. She was not ill and had no swelling or enlargement of the skin or extremities. A cystoscopic examination showed that the white urine was coming from only one kidney, and that the urine from the other kidney was clear and did not contain anything abnormal. The urine from the diseased organ was filled with peculiar organisms that eventually proved to be *filaria*; the *filaria* was later found in the blood. Dr. Winfield was consulted as to the advisability of administering salvarsan, and although there were no records of it ever having been used in this disease, he gave the patient .6 mg. subcutaneously, and there was but little constitutional reaction. The urine was examined daily, and after she had received the injection it remained white, but the *filaria* was absent on the fourth day. During the two weeks she remained in the hospital repeated examinations of the blood failed to demonstrate any of the organisms. The patient was still under observation.

DR. FORDYCE said that the reaction in the case of epilepsy was probably allied to the Herxheimer reaction sometimes seen in skin lesions. Because of the possibility of this reaction in cases of brain syphilis, Ehrlich had advised their treatment with small doses which could be repeated several times if necessary.

#### REPORTS UPON CASES PREVIOUSLY SHOWN

Scleroderma, Lupus Erythematosus, Tumor of the Shoulder, Pellagra.

Reported by DR. HOWARD FOX.

Scleroderma. Presented on May 25, 1910. The Wassermann reaction was made in compliance with a request from Dr. Whitehouse and found to be negative.

Lupus erythematosus. Presented on Sept. 27, 1910. A week later the patient went to bed, ran a continuous, irregular temperature above 101°, became gradually weaker and died on October 20th. Three days before her death she became delirious. She coughed at times, although her lungs were apparently normal upon physical examination. There



was no expectoration, no night sweats or progressive loss of weight. There were no heart murmurs. There were no characteristic symptoms of typhoid fever, such as epistaxis, rose spots, diarrhœa or enlarged spleen. The Widal reaction was not made. The Wassermann reaction was made on October 13th, and was entirely negative and the patient had not taken any mercury previously. It was impossible to obtain an autopsy.

Tumor of the shoulder. Presented Jan. 25, 1910. A biopsy was made and a small round-celled sarcoma found. The growth was removed by operation, but later recurred. The patient died on Aug. 2, 1910.

Pellagra. Presented Dec. 21, 1909. The patient had returned to his home in Georgia several months later and up to the present time had not had any recurrence of the pellagrous dermatitis. Some of the nervous symptoms, such as increased reflexes and rigidity of the legs, had not changed.

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## NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Stated Meeting held May 3, 1910.

DR. SIGMUND POLLITZER, *Chairman*.

**Eczema with Unusual Features.\*** Presented by DR. ORLEMAN ROBINSON.

The patient was a girl thirteen years old. The eruption was of five years' duration and first presented upon the arm as little, round, rosy spots, spreading to the hands. It then appeared on the forehead and neck, assuming a distinctive eczematous character behind the angle of the jaw. It was accompanied by much itching which was more marked during the warm months, becoming less active in the winter. The patient had always been in good health and had not had any skin disease that she knew of. She had been constipated since the appearance of the eruption. She had been under treatment at different clinics for several years without special beneficial results. The following was the description of the eruption as it appeared in the areas occupied by the lesions:

The forearms from the elbows to the wrists, extensor surfaces, were almost covered with lesions which were from pinhead to small pea in size, sharply limited, elevated, reddish in color, rough and hard to the touch, without any signs of vesicle formation, showing no tendency to grouping or linear arrangement and many of them having a hair follicle in the cen-

\*Further studies, both clinical and microscopical, showed this case to be one of Darier's disease.

tre. The surface of the lesions presented a sealy condition as of semi-detached epithelial cells, with normal skin intervening. In other places the lesions were more or less coalesced and showed a more intense inflammatory process, from which traumatism, as scratching, produced an oozing of a serous exudation upon the general surface. There was not shown at any place, papulo-vesicular acuminated lesions such as occurred in an ordinary papulo-vesicular eczema. The flexor surfaces were but slightly involved.

There were numerous lesions occupying the greater part of the dorsal surfaces of the hands, which were discrete, pinhead to small pea-sized, elevated, firm, not acuminated, but of a decided verrucous formation. When the palm of the hand was passed over them the sensation was as if the hand were passing over a grater, differing from warts in that the general surface was not quite as flat and the papillomatous character not so marked as in *verruca vulgaris*. There were intervening normal portions of skin. The eruption over the first phalanges of the index, middle and ring fingers was similar in character to that of the dorsal surface of the hand. The thumb of the right hand was but slightly affected, while the little fingers were entirely free. The nails showed a slight interference of nutrition as indicated by longitudinal striation. The lesions on the left hand were not quite as markedly developed as those on the right hand. The palms of the hands showed no evidence of the disease. Only a few scattered lesions were shown on the body, which were somewhat eczematous in character. The elbows and knees presented a condition of hyperkeratosis which in its objective character resembled a mild ichthyosis.

On the neck—supraclavicular region—were situated isolated millet-seed-sized lesions, sharply limited, slightly elevated, not acuminated, dark reddish in color, the redness quite disappearing upon pressure, covered with a thin scale as if scratched by the patient, without any tendency to an acute superficial catarrhal dermatitis. The face and cheeks presented a similar condition to that of the neck except that in a few areas there were signs of a superficial catarrhal dermatitis as shown by the diffuse inflammatory process accompanied by a slight scaling. There was a superficial catarrhal dermatitis of the forehead in which apparently such lesions as already described on the arm were present. A condition as of seborrhœal eczema was present in the scalp.

Summary. A case of seborrhœal eczema with formation of lesions closely resembling those of *verruca vulgaris*.

Case for Diagnosis. Presented by DR. KINGSBURY.

The patient was a small, poorly developed woman twenty-three years of age, born in Syria. She had previously been treated by Dr. Shively for a slight pulmonary lesion in his tuberculosis clinic at the Presbyterian

Hospital Dispensary and the case was referred by him to the Dermatological Service. The woman had several nodules on the right thigh and calf and according to her history they had been present for over one year. The lesion on the thigh was about the size of a small hazel nut. It was hard, elevated, and non-inflammatory. The tumors on the calf were smaller and were somewhat depressed.

DR. LAPOWSKI said that he had seen cases like this, but that he had never been able to make a diagnosis. In this case the lesion on the thigh suggested verruca, while the spots on the leg were not verrucous at all.

DR. KINGSBURY said that he was entirely at a loss for a diagnosis. The history of tuberculosis elsewhere in the body was suggestive and the lesions on the calf were not unlike those sometimes found in cases of erythema induratum; the nodules on the thigh, however, seemed more like a fibrous growth. The question could be answered only by a biopsy, which he would have performed.

#### **Lupus Vulgaris.** Presented by DR. WEISS.

The patient was a woman, forty-two years old, single, Austrian, nine years in this country. Her father died at the age of sixty-five, cause unknown; her mother died suddenly of heart disease. She had seven living sisters and three brothers, all married and all of them having healthy children. As a child the patient suffered from ulcerating glands and scrofuloderma of the face. At the age of fifteen, she had tuberculous disease of the bones of the left foot, necessitating the removal of some metatarsal bones and one toe. At the same time lupus of the nose appeared occupying both alæ; it was of the ulcerating type. Curettement and iodoform dressing brought about a fair cure with but little retraction. Soon new foci appeared and when the case was presented there was a perforative ulceration of the cartilaginous part extending down into the cavity of the nose. There was also a new lesion under the inner canthus of the left eye. As there was imminent danger of extensive breaking down of the tissues, the patient was shown to the Section for suggestions as to the best treatment.

DR. MACKEE thought that X-radiation would check the ulceration, but that the only way the perforation could be corrected was by a plastic operation.

#### **Tuberculide.** Presented by DR. DITTRICH.

The patient was a female, single, aged eighteen years, born in Russia. Her father died when twenty-eight years of age, after receiving an injury. Her mother was fairly healthy, and had had seven children of which three have died young. There was no history of tuberculosis. When twelve years old the patient had the present eruption on both knees and elbows. On the knees it lasted two and one-half years, after which time it disappeared. Small round scars, whitish in color, could be seen at the site of the former eruption on the knees. The present eruption consisted of papules in all stages of development; the lesions on the elbows were forming scars while those on the knuckles of both hands did not seem to

produce a cicatrix. The papules appeared suddenly, grew larger, and finally became pustules, and then some would break down leaving a scar. There were new ones constantly appearing. The rest of her body was clean, except a circular scar the size of a dime on the right buttock. The eruption was painful and did not itch.

DR. MACKEE said that the lesions in this case corresponded exactly with those exhibited by a patient which he had presented at the February meeting of the Section. Several of the members at that time were of the opinion that his case was one of syphilis. He had again presented the case at the March meeting to show the marked improvement which had occurred as a result of anti-syphilitic treatment. It was not uncommon to see a tuberculide respond to such measures, and he was of the opinion that both of these cases should be considered as such, at least until a more accurate diagnosis could be made.

#### Chancre of the Tongue. Presented by DR. WILLIAMS.

The patient was a man twenty-five years old. About March 18th of this year, he noticed a sore on the tip of his tongue, which by March 25th had become an oval ulcer  $\frac{1}{8}$  by  $\frac{1}{2}$  inch in diameter, sharply outlined and presenting a dirty-yellow base. It progressed steadily till April 12th, when it was  $\frac{3}{8}$  by 1 inch, elevated, indurated, and still with a dirty-yellow base. The tip of the tongue at that time was concave rather than convex. About April 15th the man developed a profuse papular eruption.

#### Case for Diagnosis. Presented by DR. MACKEE.

The patient was a man thirty-five years of age, a native of Italy. He had been under observation at Dr. Fordyce's clinic for the last two and a half months and had been presented at the April meeting of the New York Dermatological Society by Dr. Fordyce. Since then, Dr. MacKee said, the case had been more carefully studied, and many new points of interest elicited. The patient gave a rather indefinite history of having had syphilis twenty years ago. He did not remember having had a chancre, but he had a universal maculo-papular eruption, which lasted for three months and disappeared spontaneously. One year later he had an eruption of large papules which also disappeared spontaneously after the same length of time. In the third year he had ulcerative lesions, which did not improve until he took anti-syphilitic treatment. The ulcerations did not leave permanent scars. The anti-syphilitic treatment was taken for only six months. Three years later his wife gave birth to a healthy female infant. The child was now nine years old and was still in perfect health, without any of the stigmata of syphilis. The patient had had no symptoms of syphilis for seventeen years. Five years ago while in Cuba, he developed his first attack of his present trouble. Since then he had had an attack of the same eruption every Spring, which would last

throughout the summer and disappear in the autumn. Occasionally, however, there would be an exacerbation in the Fall. Each attack consisted of groups of vesicles, situated in the axillæ, on the abdomen, and groins and on the inner surfaces of the thighs. The primary lesion was a clear vesicle which would appear upon an unaltered skin, sometimes singly, but more often in a group of five or six. On the second day an erythematous base would develop, and by the third day the contents of the vesicle would become cloudy. The friction of the clothing would rupture the vesicles, producing an excoriation which would scab over; and the lesions, with the exception of pigmentation, would disappear in about two weeks. There were no subjective symptoms with the exception of a slight tingling or burning when the lesions first developed. Bullæ would occasionally occur, especially in the axillæ, but such lesions were not common. The patient was not in very good general health, and was suffering, in addition to his present eruption, from a series of carbuncles. Mercury and iodides, when given during an attack, always appeared to make the eruption worse. When presented to the Section there were no vesicular lesions, only their remains. There were many pigmented areas about the size of a ten-cent piece scattered over the abdomen, groins, and axillæ. These lesions were the remains of an attack which had disappeared two and a half months before the presentation of the case. The last attack had been treated with Fowler's solution, general tonics and hygiene, and the result had been very satisfactory. A Wassermann test was made by Dr. Swift with negative results. Dr. MacKee made a tentative diagnosis of dermatitis herpetiformis.

DR. TRIMBLE said that whatever it might be, he hardly thought this eruption could be classed as syphilitic. A syphilitic eruption in an adult was almost never bullous, and did not recur in the same place year after year. In addition to this Dr. MacKee had said that no improvement had taken place after the administration of anti-syphilitic treatment.

DR. MAC KEE thought that a diagnosis of dermatitis herpetiformis should be considered, although it might be nothing but a pyoderma.

#### Keloid Treated with CO<sub>2</sub> Snow. Presented by DR. DITTRICH.

The patient was twenty-six years old, born in Sweden, a domestic. She had presented herself at the Cornell University Dispensary about four months prior to being presented to the Section. She then had a keloid growth on her chest about a half inch long, which she said had developed spontaneously. The solid carbon dioxide had been applied on four occasions, one minute of hard pressure at each sitting. While the original tumor had disappeared, it seemed as if the area around it showed a tendency to keloid formation.

DR. MACKEE said that he was opposed to the use of the solid carbon dioxide, or any other method that produced traumatism in the treatment of keloid.



**Peculiar Congenital Eruption (Photographs).** Presented by DR. WALHAUSER.

The patient was a colored infant five days old. The family history was negative. The mother had been under observation at the Newark City Hospital for several weeks preceding her confinement, during which time no abnormal symptoms were recorded. There was nothing unusual observed about the child except the skin, which presented a peculiar circular and serpiginous eruption. Scattered over the entire integument including the back, chest, upper and lower extremities, excepting the face and scalp, were numerous circular and serpiginous sharply defined lesions, measuring from one-half to several inches in diameter. The scaling which was limited to the borders produced a striking picture, on account of the sharp definition forming variously shaped serpiginous figures and circles.

On the arms and buttocks, a few erythematous circular lesions with raised borders were observed. They marked the probable character of the eruption previous to the development of scaling. The patient seemed to be in fair condition, when suddenly on the seventh day rapid respirations developed, becoming labored as he passed into a state of coma and died.

The post-mortem examination was performed by the pathologist of the hospital, Dr. H. S. Martland, with the following result:

The heart showed the foramen ovale patent; lungs, pulmonary œdema, and both lower lobes the seat of hypostatic pneumonia; spleen, passive congestion; kidneys, passive congestion with uric acid infarets; the liver was quite jaundiced and showed bile inhibition.

There was no evidence grossly of syphilis of the liver, lungs or other viscera. Cause of death, hypostatic pneumonia.

CHARLES M. WILLIAMS, M. D., *Secretary.*

NEW YORK ACADEMY OF MEDICINE, SECTION ON  
DERMATOLOGY.

Stated Meeting, held October 4, 1910.

DR. SIGMUND POLLITZER, *Chairman.*

**Bromide Eruption in a Baby.** Presented by DR. LAPOWSKI.

The patient was a breast-fed baby, eight months old. The mother had suffered from epilepsy for the past eight years, and had taken one dram of bromide every evening for the last year. The eruption on the infant appeared six weeks ago, occupying the face, trunk, and upper and lower extremities, and consisting of patches of hypertrophied papil-

læ. The discharge from the lesions dried into dark-yellowish, closely adherent crusts, on removal of which bleeding occurred. The milk of the mother's breasts contained no bromide. The mother did not present any symptoms of a bromide eruption.

DR. DITTRICH suggested giving the mother arsenic. He had seen a similar eruption come and go in a woman taking bromides for hysteria. When arsenic was given, the eruption did not occur.

DR. CLARK advised making another effort to wean the baby.

DR. LAPOWSKI said that ordinarily when common salt was given with the bromides, the eruption receded. He had not tried it in this case, and asked if any of the members present had had any experience in the use of salt in such cases.

DR. POLLITZER said that this case was very much like one figured in Dr. Pusey's book from a photograph furnished by Dr. Pollitzer. The source of the bromide in that case was a cough mixture taken by the mother. In the way of treatment he would insist that the baby be weaned.

#### Lichen Planus Annularis. Presented by DR. POLLITZER.

The patient was a married woman, thirty years old. The affection was first noticed four years ago on the right leg, and one year ago on the left. On the inner side of the right thigh above the knee, there was a single annular lesion about two centimetres in diameter with the characteristic appearance of lichen planus. The central portion of the lesion was somewhat discolored and atrophic in appearance. In the immediate neighborhood of the annular lesion, a few small blue-red papules of lichen planus could be seen. On the left thigh, symmetrically located, there was a similar lesion about one-half a centimetre in diameter. The mucosa and skin otherwise were free from lesions.

DR. LAPOWSKI said that he had had good results in similar cases from the use of mercurial plaster, in conjunction with mercurial injections; but no good results from the X-ray.

DR. MACKEE said that there were three very good methods for treating small and persistent patches of lichen planus, namely, the X-ray, fulguration and the solid carbon dioxide. Occasionally, a single application of the X-ray would effect a cure, although it was very often necessary to give a full erythema dose before the desired result would be obtained, and not infrequently more than one application would be required. Fulguration was an admirable method of treating such lesions. Considerably less skill and less expensive apparatus were required, than when using the Roentgen ray and there was practically no danger of untoward effects. The desired result could be attained either by employing a small amount of current for several seconds or even minutes, or a large quantity for one second or less. Again, a given lesion might be cured in one treatment of sufficient time and strength to destroy the papule or patch by necrosis. On the other hand two or three relatively mild applications would often produce the same ultimate result through an intense stimulation of the local circulation, without producing necrosis. The only possible objection that could be advanced against the high-frequency spark was the pain at the time of application which was rather sharp but not unbearable.

The third method, the speaker said, was the solid carbon dioxide. Recently he had been employing the freezing process in cases of inveterate psoriasis, patches of chronic eczema, and in patches of lichen planus, with very pleasing results. The applications would cover fairly large surfaces, and were only for the purpose of stimulation, therefore the treatments were only from three to ten seconds, depending upon the pressure exerted, and the thickness of the lesion. It was not necessary to produce a bulla, only an erythema. Dr. MacKee thought that on account of the ease of application, the absence of pain attending these mild treatments, and the small amount of time required, the solid carbon dioxide offered one of the very best methods of treating such cases, where the ordinary measures had proved ineffectual.

Dr. HUBBARD said that in this case he would use carbon dioxide snow, and freeze deeply, dipping his crayon first in chloroform or ether, and then apply it firmly for 45 seconds to 1½ minutes. He thought light freezing would probably be followed by a recurrence.

**Lupus Vulgaris in a Child of Three Years.** Presented by Dr. KINGSBURY.

The patient was shown before the New York Dermatological Society on September 27, 1910 (*Jour. Cutan. Dis.*, Feb., 1911, xxix, No. 2, p. 88).

Dr. POLLITZER expressed himself strongly in favor of excision in a small lesion of this kind, which gave the smallest scar and the promptest result; and said that these advantages outweighed the risk of the development of keloid.

Dr. HUBBARD said that the lesion was so small that free excision offered a good chance of cure. The disease might be removed also by scraping and the free use of acid.

Dr. MacKee said that this soft, hypertrophic form of lupus vulgaris, especially when occurring in young people, was especially susceptible to radiotherapy. He had seen several such cases in which the tumor had been ablated or thoroughly curetted, and cauterized, only to have the disease recur at the edge of the scar, at a later period; and then, under the influence of the Roentgen ray, the disease would disappear, and either remain permanently well, or at least a recurrence, if it did occur, would be at a much later period than after surgical procedure. The speaker recalled a case which exemplified the above description, and which had been presented at the last International Congress by Dr. Fordyce. The disease in this case recurred in less than a year after a surgical operation. The mass then quickly disappeared under X-ray treatment, which was given in 1903 and 1904, and there had been no recurrence up to the present time.

Dr. CLARK agreed with Dr. MacKee that these cases yielded readily to the X-ray, especially if carried to the point of producing a marked reaction.

Dr. KINGSBURY said that the danger of keloid formation, had occurred to him also. He had examined the child, therefore, and found that the vaccination scar showed no keloid degeneration.

**Lupus Erythematosus.** Presented by Dr. HOWARD FOX.

This very extensive case of lupus erythematosus had been shown before the New York Dermatological Society on September 27, 1910 (*Jour. Cutan. Dis.*, Feb., 1911, xxix, No. 2, p. 95).

DR. CLARK called attention to the firm, flat nodules on the backs of the hands, some of which joined to form plaques. He recalled a case with similar nodules on the hands and a similar eruption on the face, which he had seen at the Skin and Cancer Hospital. It was called lupus erythematosus by several competent dermatologists, and was treated as such, without success. Later, it was cured by the use of mercury and potassium iodide. He was not willing to hazard a diagnosis of syphilis in the present case, but would suggest the use of anti-syphilitic treatment.

DR. WILLIAMS said that he had seen a case at the Roosevelt Hospital, presenting symmetrical lesions on the face, with the clinical appearance of lupus erythematosus. The patient was subject to severe pains in the joints and was gradually losing strength. General tonic treatment, and varied local treatment, were alike ineffectual, but improvement under anti-syphilitic treatment was immediate and marked. He believed the differentiation between some cases of lupus erythematosus and syphilis was exceedingly difficult.

DR. KINGSBURY said that he had seen a case similar to this one, with tubercle bacilli in the sputum, and regarded by various dermatologists as lupus erythematosus, in which the lesions had all disappeared under the influence of potassium iodide. He thought these acute cases were grave and often fatal, and apparently a disease distinct from the ordinary type.

DR. LAPOWSKI said that this case was so different from the ordinary case of lupus erythematosus, and the lesions on the back were so unusual, that it ought to be placed in a different class.

DR. POLLITZER agreed with the diagnosis. He said that it was often very difficult to distinguish between the lesions of lupus erythematosus and syphilis, as both were "imitative" diseases, and that lupus erythematosus was so subject to remissions that an improvement under treatment with mercury and potassium iodide was no proof of the syphilitic nature of the process involved.

DR. DILLINGHAM said that he had seen a case with lesions on the face and scalp very much like those shown here, and also some ulcerating lesions. He had thought it might be both lupus erythematosus and syphilis; all the lesions improved immediately under mercury and iodide; but in a short time were as bad as ever and there was no question but that it was simply a case of lupus erythematosus.

#### Scleroderma. Presented by DR. HOWARD FOX.

This case was shown before the New York Dermatological Society on May 24, 1910 (*Jour. Cutan. Dis.*, Jan., 1911, xxix, No. 1, p. 24).

DR. LAPOWSKI said that he had had good results from inunctions of mercury in cases of scleroderma, even when the Wassermann reaction was negative.

DR. POLLITZER again warned against treating everything with mercury. So many cases of chronic skin diseases fluctuated without any treatment, that conclusions drawn from the results of treatment were of doubtful value.

#### Filariasis. Presented by DR. KINGSBURY.

The patient was an anæmic, poorly developed man, twenty-three years of age. He was born in Venezuela, but when six years of age he removed to British Guiana where he lived until one year ago, when he

came to New York. About six years ago the patient began to suffer from severe pains in the lumbar region, accompanied by nausea and mild fever. These symptoms continued and several years later the man became so weak that he was confined to his bed for nearly two months. At this time his scrotum was tender and considerably enlarged and he passed blood and chyle in his urine. The scrotum gradually returned to normal size but the chyluria persisted until recently. During the few months that the man had been under observation he had gained over ten pounds in weight and his urine had become perfectly clear. This could hardly be attributed to treatment, as the patient had been taking only mild iron tonics. No quinine, arsenic, or iodide of potassium had been administered. A specimen of capillary blood was obtained by Dr. John W. Coe at 10 P. M., and active filariæ demonstrated.

CHARLES M. WILLIAMS, M.D.,

*Secretary.*

#### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building, on Monday, October 10, 1910. DR. CHARLES N. DAVIS, *President*.

#### Parapsoriasis. Presented by DR. HARTZELL.

The patient, a student of nineteen years, first came under observation four months ago. At the time of his first visit, two distinct eruptions were present, one of a few days' duration, a typical rôtheln, and the other consisted of superficial maculo-papular lesions, most abundant on the trunk, which had started six months previously. The patient was not again seen until a few days ago. The eruption since its first appearance had remained practically stationary. There was a generalized, maculo-papular outbreak, in places slightly scaly, most marked upon the trunk. The face was free. The eruption was quite superficial and resembled both a pityriasis rosea and a seborrhœic eczema.

DR. STELWAGON said that the eruption resembled markedly an eczema seborrhœicum.

DR. SCHAMBERG mentioned the fact that the seborrhœic areas were exempt.

DR. KNOWLES referred to the paper recently written by Trimble, describing cases resembling the one under discussion.

#### Lichen Planus with an Associated Follicular Keratosis. Presented by

DR. STELWAGON and DR. GASKILL.

A woman of thirty-eight years was first seen five months ago, at which time a frank case of lichen planus was present on the entire lower



extremities, the lower abdomen and the back. Individual lesions were irregular in outline, purplish in color and many had a central depression. Some of the lesions had coalesced and the condition was very inflammatory, especially on the flexor surfaces. Itching was intense. The patient had previously been treated for a dermatitis produced by belladonna. Two months after the start of the attack, the mucous membranes of the mouth and the vagina were noted to be involved and a macular eruption appeared on the palms and the soles. The arms about this time showed a light pink, small macular eruption which gradually changed until there was now a well-marked non-inflammatory folliculitis of the keratosis pilaris type. The horny plug could be readily expressed bringing with it the hair. The lichenification had increased markedly during the past two months. The lichen planus lesions had all healed, leaving marked pigmentation. The treatment consisted of bromides for various nervous symptoms, arsenic and, locally, tincture picis mineralis compound, twenty per cent., and increased to the full strength. Several of the lesions resembled those found in pityriasis rubra pilaris.

**Case for Diagnosis.** Presented by DR. DAVIS and DR. WALKER.

The patient presented was a married woman twenty years of age. In March, of 1906, she acquired an initial lesion of the genitalia, which was followed in the usual time with the generalized syphilitic eruption and the various concomitant symptoms. There was a marked enlargement of the cervical, the epitrochlear, and the inguinal glands. She had phlebitic spots on the lower legs in June, of 1907, which broke down four months later. These areas healed entirely, although the patient was quite irregular in the mercurial treatment. Lesions, nodular in type, had appeared from time to time on the posterior and anterior portions of the lower legs, which had healed under anti-syphilitic treatment. Recently, however, nodules of somewhat the same type had appeared, which had not responded to internal medications.

DR. STELWAGON said that he thought the present case resembled the one reported by Winfield, as lymphatic nodules.

**Lupus Vulgaris.** Presented by DR. STELWAGON and DR. GASKILL.

A woman of thirty-four years was presented, with an extensive patch of thirty years' duration, involving the left ear, all of the cheek and the greater part of the left side of the neck. The pathological report showed the formation found in tuberculosis of the skin, but no tubercle bacilli could be detected. The patch had been markedly improved by the local application of codliver oil and the internal administration of potassium iodide, ten grains three times daily; the treatment had extended over a period of two months.

**Psoriasis in a Brother and Sister.** Presented by DR. KNOWLES.

The patients presented were a boy of eleven and a girl of nine years. The little girl had been under observation for several years, and excepting for a few months had never been entirely free from the disease. The eruption had involved, during the various attacks, the greater part of the general cutaneous surface; the face, the hands, and the feet being unaffected. The lesions were mostly dime in size, and smaller, although some of the plaques had been silver-dollar in size. The boy was first seen ten days ago, at which time the trunk and the upper part of the extremities, both the upper and the lower, were involved by typical punctate and guttate, and a few dime-sized lesions, of two weeks' duration. At the time of presentation, both patients exhibited the characteristic lesions of psoriasis.

DR. HARTZELL referred to the family cases of psoriasis that he had had, the grandfather, the father and the grandson having been attacked.

DR. SCHAMBERG mentioned two cases in the same family, a grandmother and her granddaughter.

**Prurigo Mitis.** Presented by DR. STELWAGON and DR. GASKILL.

A little girl, seven years of age, fairly well nourished, was presented with a chronic disease of the skin. The child's mother was born in France and the father in Italy. The eruption was practically limited to the extensor surfaces of the extremities, chiefly on the lower portions of the arms and the legs. The lesions consisted of deep-seated, whitish, and red papules, wheals, and crusts and excoriations from scratching. The condition had lasted for three years.

**Case for Diagnosis.** Presented by DR. REILLY (by invitation).

A patient, a man of fifty years, was presented for the diagnosis of a lesion, one-half dollar in size, on the left forearm. The man gave the interesting information that both of his parents had died from cancer. The lesion for which he was presented had started some months ago and had rapidly reached the present dimensions; it had grown but slightly recently. The growth was sharply marginate, raised about one-eighth of an inch above the surrounding skin, and the surface was red in color, rough, and papillomatous. The patient was treated by Dr. Hartzell, at the University Hospital, in 1895, for a rodent ulcer. Smears were negative; no sections had been made.

Those present considered that the lesion resembled markedly an epithelioma, but could not explain the rapidity of the growth.

**Generalized Dermatitis from the Local Application of Iodoform.**

Presented by DR. DAVIS.

Ten days ago the patient, a male of thirty-five years, born in Russia, was first seen. The man, at that time, had a generalized eruption, involv-

ing practically the entire cutaneous surface, of a bright-red color, macular in spots, but chiefly in large sheets and scarlatinal in type. Some days after the beginning of the outbreak, exfoliation started, the epidermis peeling from the entire skin surface. The history was obtained that several days before the appearance of the eruption a toe had been injured and the wound for several days had been packed with iodoform gauze.

**Staphylococcic Infection.** Presented by DR. PFAHLER.

The patient, a male of forty-five years, gave the history of having had the present condition off and on for some years. The eruption consisted of grouped, dime, and smaller-sized, somewhat deep-seated, crusted lesions, with an inflammatory areola. The outbreak was noted on the eyebrows, the upper lip, the chin, the neck, and the right wrist.

**Dermatitis Herpetiformis.** Presented by DR. STELWAGON.

The patient, a male of thirty-eight years, was well built and had always been healthy, excepting for the present disease. He had always performed hard manual labor, in recent years having been a boiler maker. The patient first developed the outbreak in the autumn of 1906 and was treated by Dr. Hartzell and Dr. Knowles in the University Hospital. Most of the attacks had been very severe; the patient had, however, responded on each occasion to vigorous arsenical treatment. During the intervals between these severe relapses the skin had been almost normal, only a few vesicular lesions being present. The attacks were now becoming more numerous and the response to treatment was slower and the skin did not clear up as on former occasions. Practically every portion of the cutaneous surface had been involved, either in the present relapse or in those of previous occasions. The predominant type had been in each attack the vesico-bullous. The mucous membrane of the mouth had been involved on several occasions. Itching was intense. Grouping of the lesions had been marked in each attack.

**Mycosis Fungoides.** Presented by DR. STELWAGON.

The patient, a male of sixty years, was born in England and gave a history of having had the present disease for four years. The eruption was fairly well generalized, including the face, the trunk, and the extremities. All of the stages of the disease were present, the eczematous patches being the most abundant; there were a few subcutaneous nodules and a tendency to the formation of cauliflower-like growths. The itching was intense.

DR. KNOWLES said that he had had an opportunity of photographing the case some nine months before in Dr. Davis' clinic at the Pennsylvania Hospital.

**Excellent Result from Roentgen Treatment of Epithelioma.** Presented by DR. PFAHLER.

Four years ago, the patient who was then thirty-eight, was injured on the lip; the wound apparently healing in seven weeks. One year later a discharging ulcer developed at the site of the former injury. Two years later the patient came under observation, the lesion having steadily grown until there was involvement of the entire lower one-third of the left cheek and one inch of the upper lip. The entire growth was excised and X-ray treatment was started the day following the operation, on the open wound. The Roentgen treatment was continued for some months, fifty exposures being made, until all evidence of malignancy had disappeared and the wound had entirely healed. Several plastic operations had been performed in the reformation of the mouth and the cheek. The result was excellent.

**Lupus Erythematosus in a Negress.** Presented by DR. SCHAMBERG.

The patient presented was a negress, thirty-nine years of age, with an extensive eruption of both cheeks, of four months' duration. The patch on the right cheek extended into the hair and involved the parietal region. There had been hair loss in the latter area. The patches were sharply marginate, of a pinkish-white color, smooth and with but little noticeable change in patulousness of the hair follicles. The contrast of the color of the plaques against the black skin of the individual was extremely grotesque.

DR. DAVIS thought that the present eruption resembled seborrhæic eczema.

**Localized Psoriasis.** Presented by DR. STELWAGON and DR. GASKILL.

A male, of seventy-three years, was exhibited with an eruption limited to the dorsal surfaces of the hands, the forearms, and the elbows, of two years' duration. According to the history, the patient had always had the outbreak limited to the areas mentioned. The lesions were typical of psoriasis.

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

# REVIEW OF DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MAC KEE, M.D.

GENERAL THERAPY. BACTERIOLOGY AND PARASITOLOGY.

By R. C. JAMESON, M.D., Detroit.

**The Treatment of Skin Diseases by Hyperæmia.** W. K. SIBLEY, *Lancet*, clxxx, No. 4562, p. 298.

Bier's method with variously shaped glass cups was used in a number of cases of different skin conditions, applying the hyperæmia apparatus for periods of five minutes with three minute intervals, several applications being made at one sitting. He used ointments, Roentgen-ray and other methods of treatment on other lesions at the same time to compare the effects and found the results after hyperæmia treatment very satisfactory. He concludes from his observations that practically all chronic forms of skin diseases are benefited by hyperæmic treatment, as the local congestion facilitates the action of ointments and lotions and also improves the nutrition of the part. Many different kinds of skin diseases were treated including acne, rosacea, eczema, keloid, lupus vulgaris, seborrhœa, syco-sis, ulcers, and psoriasis, but the treatment seemed to give the best results in psoriasis.

**The External Application of Magnesium Sulphate in the Treatment of Erysipelas.** K. B. CHOKSY, *Lancet*, clxxx, No. 4562, p. 300.

The drug is used in a saturated solution in water, applied well beyond the area affected upon 10 to 15 layers of gauze and covered with oiled silk. This should be moistened at least every two hours and the dressing removed for inspection every twelve hours. The inflamed area should not be washed during treatment. Its action is not yet explainable, but it gives excellent results even though used empirically. He gives his results in 72 cases treated by this method, showing the remarkable effect of the drug in lessening pain, reducing temperature and preventing extension of the disease without any special internal medication except for complications as they arise.

**Ætiology of Psoriasis Vulgaris.** SELLEI, *Wien. klin. Wchenschr.*, 1910, No. 29, p. 1075.

The author describes bodies which he almost invariably found in psoriasis vulgaris in streak preparations from irritation serum or the pulp of the rete and deeper cutaneous layers, obtained through deep abrasions



after most thorough removal of the scales. These bodies are sharply outlined, circular and ovoid, and can be especially well stained with alkaline methylene blue according to Locffler's method. They are almost always scattered and are sometimes surrounded by a bright areola. They may be confused with pigmentary deposits, eleidin or keratohyalin granules or with the schyzones of the red or inner bodies of the white blood cells. Seille's psoriasis bodies differ in a few essential points from the formations described by Lipschütz, but he does not consider his researches conclusive, although he regards these bodies as the probable exciting cause of psoriasis.

**Personal Experience with a Very Restricted Diet (Rice) in Acute Inflammatory Diseases of the Skin.** L. DUNCAN BULKLEY, *Medical Record*, lxxix, No. 4, p. 139.

The author believes that dietetics and nutrition are of great importance with regard to the production of many diseases on account of the influence they possess on phagocytosis. A diet of boiled rice, bread, butter, and water in a large number of cases of acute inflammatory dermatoses has given excellent results, as in cases of erythema multiforme, acute, generalized lichen planus, dermatitis herpetiformis, urticaria, acute generalized eczema, and some cases of developing psoriasis. He gives several illustrations of the beneficial action of the restricted diet in cases of eczema and relates his personal experience during an attack which simulated a dermatitis from poison ivy. The hands were extremely sensitive and had increasing vesicles accompanied by great swelling of the fingers and arms. Five days after the disease began he restricted his diet to boiled rice, bread, butter, and water, followed by great relief in twenty-four hours and a complete cure within one week. A later return of the disease was just as promptly controlled by the same means.

He reasons that the end gained was attained by relieving the liver and kidneys as far as possible from the intake of exogenous proteids, so that these organs could better eliminate the effete nitrogenous products.

**Microscopic Investigation of Bullous Skin Diseases.** B. LIPSCHÜTZ.  
*Wien. klin. Wchnschr.*, 1910, No. 22, p. 474.

The author has made a microscopic study of the contents of bullae in pemphigus, dermatitis herpetiformis, herpes zoster, erythema bullosum, and in factitiously produced blebs and blisters arising from burns. The investigation was begun in February, 1908, and continued to the present time. The contents of the bullae were obtained with careful, antiseptic precautions and a thin coating of serum was placed on the slide, dried in the air, fixed in alcohol, or alcohol and ether, and stained with fuchsin or methylene blue. Besides the presence of many cellular elements Lip-

schütz found an enormous number of little bodies. These small bodies give an entirely different picture when the Giemsa stain is employed; a vivid tint is produced, these cells being more highly colored than any other in the field. The color varies from a red-violet to a bluish or even, at times, a dark blue. They are regular in distribution, being found in all of the fields examined, either singly or in groups of two. They are often found in the meshwork of stained fibrin and never penetrate the corpuscles. Because of the intensity of staining, the little bodies often appear larger than they really are. They are round, sometimes somewhat pointed, one-quarter micron in width, and in dark-field illumination appear of a whitish or grayish color. These little bodies were found constantly in the various bullous diseases examined. The author is unable to explain the nature or meaning of the small bodies described by him.

**A Case of Leprosy Treated with Salvarsan.** HERMAN ISAAC, MAX SENATOR and C. BENDA, *Berl. klin. Wchschr.*, xlviii, No. 11, p. 470.

The patient was a strong, healthy looking man who had been treated by specialists in Paris and Russia for a dermatosis consisting of brown nodules and scars which covered the body, arms, and legs, leaving the face, scalp, and neck free. The nodules were of various sizes and were in and on the skin, while the scars showed a characteristic parchment-like appearance with a brown border. The patient stated that the trouble had started with no inflammatory symptoms or pus formation. The whole appearance could easily be considered syphilitic and the Wassermann reaction was positive. He was given .45 gm. subcutaneously but did not stand the injection well and the disease was not affected. A second injection of .5 gm. was given later on without any appreciable result. The case was finally diagnosed as leprosy of the anæsthetic type.

**Treatment of Rodent Ulcer by Calcio-Phosphate of Uranium.** ALBERT CHURCHWARD, *Lancet*, clxxx, No. 4567, p. 650.

The author has treated several cases of rodent ulcer by this means, obtaining cures in from five weeks to four months, even after the use of the X-ray. He has a standard of uranium emanation obtained by placing the mineral on a photographic plate in the dark for three hours, which standard should be equaled by the radioactivity of the mineral to be used. Treatment is carried out by placing a layer of gauze or lint over the ulcer and allowing the mineral to rest upon this for three hours daily, increasing to four or five hours or decreasing to one or two hours depending upon the presence of a dermatitis. The method is recommended on account of being inexpensive and simple, so that the patients can carry on the treatment at home. He also believes the scar to be less than that after any other method of treatment.

**The Specific Treatment of Frambæsia with Salvarsan.** R. P. STRONG,  
*München. med. Wchnschr.*, lxxiii, No. 8, p. 398.

The treatment of this affection has hitherto been very slow and tedious, patients not responding to treatment and results being difficult to obtain. The author has treated thirty cases with salvarsan, giving .3 to .4 gm. prepared with methyl alcohol. The injections were given in the glutei (15-20 cc. in each side) and were followed by redness, swelling, and induration, but no pus.

Salvarsan seems to be an ideal specific for frambæsia as the granulations begin to disappear in three or four days after the injection and in ten to twenty days are usually gone, leaving a completely smooth, pigmented skin. Nodules 1 cm. in diameter are absorbed and deep ulcerations heal in three to four weeks.

After injection a slight redness appears within 24 to 48 hours at the border of the lesions. Phagocytosis takes place in the area, which then becomes gray or brown in color. The spirochaetae quickly disappear as well as the granulation tissue, which is replaced by dark, pigmented areas that later on appear as normal skin.

No relapse has occurred in six months although no case received more than one injection, but a second dose is advisable if the ulcerations are old and extending. Children received .25 to .3 gm., adults .5 to .7 gm., local treatment being unnecessary except for secondary infections.

The good results obtained would appear to offer new grounds for the belief that syphilis and frambæsia are caused by the same organism; nor is it strange that the drug can produce such results as both organisms are biologically and morphologically very similar.

**The Effect of Salvarsan on the Lepra Bacillus.** D. E. MONTESANTO,  
*München. med. Wchnschr.*, lviii, No. 10, p. 511.

The author continues his remarks on the cases already treated and reported, giving a short analysis of each.

He sums up and draws conclusions from his work as follows: Small doses given subcutaneously have no effect upon the Hansen bacillus but larger doses intravenously exert a favorable influence upon the disease.

The larger doses cause the Herxheimer reaction and have a positive destructive action on the organism even if insufficient to completely destroy the infection.

Salvarsan is indicated in the early cases where the number of bacilli is comparatively few and also in cases where the nodules have broken down or where there has been great loss of tissue.

The Hansen bacillus may have no strong oxiamidoceptor so that the organic part of salvarsan has not the same affinity for the protoplasm of the bacillus as it has in syphilis, thus rendering the arsenic only moderately parasiticial.

**Artificial Cultivation of the Lepra Bacillus in Hawaii.** HARRY E. ALDERSON, *California State Jour. Med.*, ix, No. 3.

Brinckerhoff, Currie, and Holman have finally succeeded in growing the organism of leprosy and have been able to transplant it and carry it to the tenth subculture.

Pure culture was obtained by growing the organism with the cholera spirillum and amœba. Inoculations failed when obtained from old cases or those treated with chaulmoogra oil, but were successful if taken from early untreated cases, taking the serum from recently deposited, non-ulcerated nodules.

Many difficulties were encountered in this work on account of culture media, increased virulence of the cholera organism, disturbance of the cultures, etc. Culture tubes were not disturbed or examined for growth for three weeks. The mixed culture is transplanted three or four times and then subjected to a temperature of 60° C. for three minutes, which kills the cholera spirillum and amœba, leaving the lepra bacillus in pure culture after transplantation.

In young cultures the multiplying organism appears as a short, plump, acid-fast growth occurring in chains, which later tends to return to the form seen in tissue. It is believed that the next few years will see a wonderful advance in the treatment of leprosy after emulsions have been prepared and used for vaccine treatment of the disease.

**Ointments and Their Therapeutic Use.** W. T. CORLETT, *Med. Jour.*, Cleveland, x, No. 3, p. 302.

Corlett classifies ointments as follows: First, protective, emollient or soothing; second, astringent; third, stimulating; fourth, antiseptic; fifth, absorbent, stating that the base should vary according to the use for which it is intended. Ointments of the first class should not be easily absorbed but should be a pliable covering to the skin, the best base for such ointments being petrolatum, lard with paraffin, spermaceti or wax. However, such bases should not decompose and petrolatum is a decided irritant to some skins, while lard is easily decomposed unless sterilized or benzoinated, and lanolin alone is too rapidly absorbed.

Astringent and stimulating ointments require penetration and absorption, the best bases for absorption being lard, goose grease and lanolin. The action of antiseptic ointments is purely epidermic and absorption should not be produced. Diadermatic ointments are employed to act on the deep follicles of the skin and may be either stimulating, parasitic or constitutional, the base being selected to suit the various requirements. Jackson believes that goose grease is the most easily absorbed base.

The Present Position of the X-Ray Treatment of Ringworm. S. E. DORE, *Lancet*, clxxx, No. 4564, p. 432.

The author considers that the X-ray offers many advantages over the older methods of treatment on account of the shorter duration of treatment, less liability to infection of others, no ointments to use, etc. Permanent baldness does not result and cicatricial alopecia is now practically unknown. Sabouraud's results in Paris were equally striking, the X-ray treatment dispensing with wards of 150 beds which had been used for ringworm cases. The treatment now requires three months and Sabouraud believes that in future ringworm will be only sporadic or occasionally epidemic in Paris.

Permanent alopecia may result if the dosage is too great, or failure to cure will be the result if the dosage is too small to cause epilation, but the difficulty in accurately estimating the dosage has been overcome by the use of the Sabouraud-Noiré pastille. The pastille must be placed midway between the anticathode and the skin (7.5 cm. from each) and as nearly as possible in the direct path of the central rays. It should also be on a metal surface and be protected from light during the exposure. Comparison with the standard B tint should be made by daylight. A tube of medium hardness should be used, one that will maintain a spark gap of 3 to 4 inches, and a milliamperemeter should be used in the secondary circuit.

Permanent alopecia without preceding dermatitis is rare but may be due to a second exposure given too soon, the application of too strong remedies before the X-ray or to inaccuracy in methods of treatment. Regrowth of hair usually begins within six months but may in rare cases be delayed for one year.

Sporotrichosis. E. VON OFENHEIM, *Lancet*, clxxx, No. 4567, p. 659

The author gives the history of a rather obscure case of sporotrichosis which was difficult to diagnose. The patient first had enlarged cervical glands which were removed, leaving the patient in good health for three years. Then all the glands became enlarged, a diagnosis of Hodgkin's disease being made. X-ray treatment gave no result. Later, a fairly hard, somewhat tender swelling appeared over the tibia, causing a change in diagnosis to a possible tuberculous periostitis, gumma or osteosarcoma. The Wassermann reaction was negative. Cultures were made with blood taken from the tibial swelling at different times, while the cavity was subsequently opened and drained. Cultures later showed colonies of a yeast organism and the same organism was obtained in cultures taken from ulcerated lesions on the other leg. The author is convinced that it is a case of sporotrichosis.



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## PRESIDENT'S ADDRESS.

By DOUGLASS W. MONTGOMERY, M.D., San Francisco.

**G**ENTLEMEN:

In the address of welcome delivered before this Association when it met in Philadelphia the year before last, our then President, Dr. T. C. Gilchrist, mentioned the desire for a remedy against syphilis that would act in those cases where mercury and iodide of potash are ineffective. The fulfilment of this desire came unexpectedly soon, and through the genius of Paul Ehrlich. In salvarsan we now have a remedy that acts marvelously in malignant syphilis, and therefore in just those cases in which mercury and iodide of potash are almost powerless. That it does not realize the first expectations of a cure for syphilis with one injection or even with several, is only what could have been anticipated by those who have had experience with such a persistent disease as syphilis in the human being.

The introduction of salvarsan constitutes one of the most notable advances that has ever been made in therapeutics, and is all the more wonderful in not being stumbled upon, but as being the fruit of painstaking work carried out according to a definite plan. The discovery was also remarkable in the number of elements assembled, as it was the result of finding the specific syphilitic microörganism, of its inoculation into animals, and of the clever manipulation of synthetic chemistry. It is hard to tell what new discoveries will be made in traveling along the same road.

Salvarsan, as before mentioned, has been found an excellent remedy in malignant lues, and in this alone it constitutes a most valuable addition to our means for controlling this disease. It has also

been found of great value in those cases where there is frequent recurrence of mucous patches, combined with a persistence of the Wassermann reaction, in spite of repeated courses of treatment with mercury and the iodides. In what manner it will be possible to secure a complete and permanent negative Wassermann, and what the full meaning of this negative finding will be when obtained, is not yet quite clear.

There are no sadder cases met with in the practice of our profession than those in which medical men become infected with syphilis in the course of their work. Obstetricians are particularly exposed to this mode of infection, and to the conscientious among them the question of continuing in their vocation becomes very real. The wonderful symptomatic efficiency of salvarsan, together with its stimulating effect on epithelium, causing the rapid drying up of infective lesions, might easily render such men perfectly innocuous and relieve them from taking an enforced vacation that might be a decided hardship to them.

The new turn given to medical thought by the study of organic and physiologic chemistry, the phenomena of anaphylaxis and immunity, and tests such as that of Wassermann, have necessarily had a marked effect on our literature. Many of the words used are entirely new, and many of the names do not represent things at all, but ideas or theories. Under such circumstances there is real danger that our ways of thinking will lose in preciseness and gain in nebulosity. We should be insistent in urging the investigators along these lines to define accurately the words used, so that their knowledge may not remain a sealed book to us. Of course, in the birth of any science, the difficulties in the way of accurate verbal definition are very great, because recently discovered facts are continually crowding in and upsetting the most ingeniously devised theories. The new facts and the new theories have all to receive new names, or adaptations of old ones.

In the days of humoral pathology, medical literature was a far-rago of words and very little else. Then came with Bichat, Rokitansky, Skoda, and Virchow, an era of precision in which we had at least the architecture of disease to which we could cling. There was then witnessed the strange sight of a people, the Germans, peculiarly prone to subjective reasoning, taking up objective description with enthusiasm. After an era of pathologic anatomy and of diligent descriptions of disease, there came an era where the enthusiastic workers were almost wholly occupied with microorganisms. This

marked a decided advance in precision of treatment as it gave objectivity to our therapeutics. In many instances the modes of treatment were undoubtedly wrong, but still the moral support of having a tangible object at which to strike was of undoubted value both to the physician and to the patient. It had the cardinal failing, however, of centering too much attention on the parasite, and of neglecting the patient. I well remember, about twenty-five years ago, some of the older men objecting to what they designated as the germ theory of disease, saying that if it were true that disease was caused by microorganisms, a man once attacked could never recover. This very point of the contest between host and parasite is what has led to the brilliant discovery of the serum cure for diseases such as diphtheria and cerebro-spinal meningitis, and has naturally led to the great subject of serology.

This important question of serology is now engaging a just measure of attention, and promises to give us a telologic insight into disease that we never had before. On reflection, the relative greatness of this subject slowly dawns on one. The solid basis on which our knowledge of the human body is built, is the normal anatomy that the Italians developed so delightfully hand in hand with painting and sculpture. One has only to recall any of the old atlases of anatomy to appreciate how closely allied these studies were. Then instantly comes to mind the engraving on the first page, showing man, the Lord of Creation, standing in a mediæval landscape, posing as gracefully as Apollo Belvidere or the Archangel Michael, but stripped of his skin and of his subcutaneous tissues. The discovery of the circulation of the blood, the chief serum of the body, by Servetus and Harvey was serologic and was the flower of all that labor as far as we medical men are concerned.

Following on normal anatomy, the knowledge of which is now so vulgarized that it has entered into the daily life of the people, came pathologic anatomy with its brilliant solution of numberless questions. Still the changes seen in the study of pathologic anatomy were end results and unsatisfying. The study of the ruin accomplished by age and disease on the architecture of the more stable tissues may be compared to the study of the wear and tear wrought by time and work on a bank building, and trying to deduce from these the intensity and importance of the financial transactions that had taken place within its walls.

In this very regard can be seen the just importance that clinicians gave to the examination of the excretions of the body, especially

of the urine, for as a workman is known by his chips, so the physical work of the body is known by its urea. But the ingredients of the urine, whether urea, or albumin, or sugar, are end results also, and are unsatisfactory. Almost at no point either in anatomy, or in pathologic anatomy, or in the investigation of the secretions had observers touched on the teleologic or ultimate causes of the phenomena of the great diseases. The study of the parasites causing diseases brought us more closely in contact with the true nature of pathologic processes than the study of the tissues or even of the secretions, but still we were measurably distant from the real peccant material. We are now, however, entering a new field that promises much more than any previous work ever could, where the histologist, physiologist, pathologist, bacteriologist, and organic chemist are studying the fluids of the body, and the toxic substances derived from bacteria. This serological epoch could not have come earlier, as it had to await the fulness of knowledge in other branches.

According to Adami and Nicholls, the quantity of the blood in the body is subject to wide variations, between a sixteenth and a thirtieth of the body weight, the average being about one-twentieth, but not through a knowledge of its actual quantity do we gain a just conception of the blood's importance, but rather through an estimation of the swiftness of its circulation. Reckoning that two ounces of blood are ejected from the heart at each beat, and that there are sixty pulsations a minute, the quantity circulated in twenty-four hours is considerably over five tons. The other fluids of the body such as the water used in digestion, and the lymph are ceaselessly flowing also. Take for example the juices used in digestion, and we find that the saliva, the gastric juice, the bile, and the pancreatic fluid constitute the stately quantity of twenty pints. This leaves out of account the large quantity of juices that must be given off by the mucous membrane of the duodenum and the small bowel. With these few rude facts we begin to get an inkling of the importance of the new studies in serology.

But it is not alone in the enormous quantities, and in the swiftness of the transitions that we see the relative importance of serology. The sensitiveness of these liquids to certain irritants is incredibly great, and far surpasses the sensitiveness of the special senses to their specific irritants of touch, sound or light. The study of anaphylaxis or the sensitization of serum, is now one of the most interesting in pathology and promises to elucidate many of the phenomena observed on the skin, and notably of certain eczemas. An exceedingly-

ly small dose of horse serum, one ten-thousandth of a cubic centimetre, injected into a guinea pig, so sensitizes its sera that on giving another dose of several cubic centimetres some time later, the animal is killed by the anaphylactic shock.

It is remarkable that the sensitization endures not alone through the whole life of the animal sensitized, but is transmitted to the first generation of descendents, and throughout, appertains to a fluid that changes, as above shown, its material content with unthinkable swiftness. It is another instance in nature showing that what appear to be the most fleeting things are often really the most enduring. Philologists show us that a word in the mouth of the people is more lasting than that graven in stone, and more recently still is the discovery that modes of thought, as shown in forms of language, are more enduring even than words. An anaphylactic impression given to the fluids of a body abides in the descendents' sera after the body in which the sensitization took place has been borne to the grave. The discoveries of the attributes of the sera of the body give us a tangible scientific insight into what has been vaguely designated the patient's constitution, and are particularly interesting to us, as it is probable that the phenomena of anaphylaxis will elucidate many of the eccentricities of diseases such as eczema, that thinkers like L. Brocq have taught us to consider as cutaneous reactions.

Victor Hugo has said that it is the fate of the human race to always fight shadows, and in nothing is this so true as in eczema. The symptoms presented by each case of eczema are so many, and at the same time the difference between the symptoms of each case are so marked, and still at the same time the general resemblance so great, that while the physician is forced to place the patients under the common head of eczema, yet he is utterly unable to find the same causes at work in any considerable number of the entire group. This is what has led Brocq to classify eczema as a cutaneous reaction; what has led others to say there is no such thing as eczema, that there are only eczematous people; and what has led many now to the view that eczema is merely a peculiar irritability of the skin that may be excited by the most various stimulants. And these views seem to be most consistent with the clinical facts, and the ones now held by many of our best clinicians. Not long ago I received a letter from one of our colleagues in which he said jocularly, that he was endeavoring, like the rest of us, to make a livelihood by diagnosing and treating eczema. This is ever our main task: to comprehend and to treat one



of the most elusive diseases in the whole field of medical work. With the discovery of each new external cause for a catarrhal affection of the skin, we appeared to be getting nearer to our final goal of solving the riddle, only to find that the real riddle lay in bringing to light why a person will get an eczema under an irritation that has no detrimental effect whatever on almost any one else, and that not at all times will the same irritant cause an eczema even in the same person.

This susceptibility or vulnerability of the skin was ascribed to the patient's constitution, and attempts were made to classify patients as having this or that diathesis. The vexatious thing about all this lay in the fact that our views on constitution lacked scientific foundation and when mentioned naturally lead to an outburst of eloquence rather than to a real elucidation of the subject. This simulacrum of scientific nourishment was particularly irritating to those who had done conscientious work on eczema as a local disease. It was only natural, therefore, that the men who were working so well and so faithfully eliciting concrete facts were disinclined to listen to banalities on the constitution about which few knew anything positive, and were often impelled to exclaim: "Hath the nurse holden out the bosom and is there nothing but wind in it?" They were just as disinclined to listen to discussions on food as a cause of catarrhal inflammation of the skin, and for much the same reason.

Now both the matter of constitution and also the effects of food and drugs and their peculiarities, eccentricities, and idiosyncracies are placed in a different light by the investigation of the bacterial toxines, and the curious reactions of the blood both to toxines and to normal albumins such as serum, red blood corpuscles, and egg white. We now seem in a fair way to know something about the human constitution.

SARCOID TUMORS OF THE SKIN WITH REPORT OF A  
CASE OF THE BOECK TYPE.\*GEORGE HENRY FOX, M.D., New York,  
and

UDO J. WILE, M.D., New York.

UNDER the name of sarcoid tumors Kaposi,<sup>1</sup> in the fifth edition of his "Lehrbuch der Hautkrankheiten," provisionally grouped mycosis fungoides, lymphoderma perniciosum and sarcomatosis cutis. His object was to point out the nosological relation between sarcoma and certain granulomata of probable infectious origin. Spiegler,<sup>2</sup> Max Joseph,<sup>3</sup> Fendt<sup>4</sup> and others adopted the name, but restricted it to a group of neoplasmata composed of round cells and characterized by a limited growth and comparative benignancy. In 1899, Boeck<sup>5</sup> published in *THE JOURNAL* a notable article on "Multiple Benign Sarcoid of the Skin." In this he reported a hitherto undescribed dermatosis for which he claimed a characteristic and unmistakable clinical as well as histological appearance. Cases of an identical or similar nature have since been reported by observers in various countries and a rather extensive literature on the subject of this rare disease has already developed. In America the only cases reported are those of Gottheil<sup>6</sup> and Pollitzer.<sup>7</sup> Since his first communication Boeck<sup>8-9</sup> has reported a series of cases and elaborated on his early observations. In 1904, Darier and Roussy<sup>10</sup> described under the name of subcutaneous sarcoid, an affection closely resembling that of Boeck though differing from it in various anatomical and clinical features. From their cases and those reported by others and from the various discussions of the subject of sarcoid tumors, it is evident that while the clinical features of this group are sufficiently characteristic to render a diagnosis easy, there is a notable variation in the histopathology.

Great credit is due to Darier<sup>11</sup> for an exhaustive study of the subject of both cutaneous and subcutaneous sarcoids and of their relationship to sarcoma, lymphoderma and tuberculosis. From a careful review of the literature he arrives at the conclusion that the reported cases may be classified under four distinct types, as follows:

1. The multiple benign sarcoid of Boeck.
2. The subcutaneous sarcoid of Darier and Roussy.

\*Read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 25-27, 1911.

3. The nodular sarcoid of the extremities resembling erythema induratum.

4. The sarcoid of Spiegler and Fendt which, unlike the above mentioned types, shows no relationship to tuberculosis, but seems rather akin to the neoplastic lymphoderma.

The Boeck type of sarcoid may present one or more large nodules, or occur in the form of numerous papules, or one or more infiltrated plaques. It usually occurs upon the face, back, shoulders, and extensor aspects of the arms. The general health seems but little affected and subjective symptoms are slight if present. The tumors are firm and elastic, reddish or purplish in color, may show delicate peripheral telangiectases and occasionally slight scaling. Under glass pressure, according to Boeck, the nodule is seen to be composed of minute grayish-yellow foci, which appearance led him in his later writings to use the term, "miliary lupoid." The course of the disease is chronic and the lesions never ulcerate or soften. When involution occurs a central umbilication forms, with gradual flattening of the periphery until a pigmented area or slight atrophic scar remains.

In this type the histological picture is quite as characteristic as the clinical picture, although some deviations do occur from the description originally given by Boeck. The sections show the presence of sharply circumscribed, deep-seated nodules, which fill the perivascular lymph spaces and which are separated one from the other by connective tissue septa, which seem to have been pushed aside by the growing infiltration. The cell type is epithelioid, with faintly staining nuclei. At the periphery are seen lymphocytes in varying numbers, few plasma cells and scattered here and there giant cells having many nuclei, and rarely giant cells of the true Langhans type. The elastica is well preserved in the connective tissue septa, but is quite absent from the centre of the nodules and arterioles may be seen traversing the latter. There is never microscopic evidence of caseation necrosis. As typical for the disease as any one factor and perhaps the most constant finding, is the involution of the nodules under the influence of prolonged arsenical medication.

The second type, described by Darier and Roussy, is a rarer form of sarcoid, and presents painless, subcutaneous, round or oval nodules of a hazel-nut or walnut size. These occur exclusively on the trunk, particularly the upper portion. But three such cases are recorded by Darier, all occurring in adults. Histologically, this

form differs from the Boeck type in presenting an even closer resemblance to tuberculosis. The nodules are composed of epithelioid cells and lymphocytes, with numerous giant cells; the changes are less circumscribed and distinctly more infiltrating than in the Boeck form; but despite these differences the processes in the main seem very similar.

A third group, suggested by Darier, includes cases resembling very closely the erythema induratum of Bazin and to which he has given the name, "*sarcoides noueuses et nodulaires des membres.*" The cases in this group are more numerous than in the other two; they occur principally in adult women, are chronic in course, and present, as a rule, hazel-nut-sized, reddish or purplish tumors, and infiltrations on the arms and legs, the extensor surfaces being a special site of predilection. Such cases have been described as sarcoid by Pelagatti,<sup>12</sup> Thibierge and Bord<sup>13</sup> and by Darier himself. Many other authors have also described such cases, but have classed them as atypical examples of Bazin's disease. Remembering that true Bazin's disease may occur on the arms, body or even on the face, it is hard to separate this group of sarcoids from erythema induratum. Indeed this group further differentiates itself from the other sarcoids by occasional ulceration, and by the almost constant positive tuberculin reaction; furthermore, in isolated instances, Ravaut and Thibierge,<sup>14</sup> Carle,<sup>15</sup> and Colcott Fox,<sup>16</sup> were able to demonstrate tuberculosis in inoculated animals, and Philippson<sup>17</sup> succeeded in demonstrating tubercle bacilli in one case.

Darier's fourth type of sarcoid tumors embraces the cases of Spiegler and Fendt with round cells and non-tuberculous structure, which might be regarded as lymphogranulomata. In this group the lesions occur as purplish-red tumors lying deep in the cutis, chronic in course, exhibiting no tendency to ulceration and affected usually by arsenical medication. They have, except for a single fatal case reported by Spiegler, the same good prognosis as the Boeck and Darier form. Histologically, they show aggregations of round cells more or less circumscribed, at times enclosed in a capsule of connective tissue. Giant cells and epithelioid cells occur in but small numbers. It is highly probable that many if not all of the so-called cured cases of sarcomatosis cutis belong to this group, which is readily distinguished from true sarcomatosis cutis by the extreme malignancy of the latter and its tendency to invade the inner organs.

That combination pictures of these several groups may occur is a point insisted upon by Darier. The following case, for example,

conforms, in its clinical aspect, identically with the diffuse form of the Boeck sarcoid type, while its histology shows variations which distinguish it somewhat from this form.

Mrs. A. F., twenty-five years of age, born in Switzerland, gave the following history. About three years ago, while in the fifth month of pregnancy, a small, firm, reddish papule was noticed on the forehead. The lesion, which was slightly pruritic, gradually increased in size until it looked like a ringworm, for which it was treated. It disappeared when the baby was born, but on cessation of nursing three months later, three similar lesions appeared upon the forehead and cheeks. They were of a reddish hue and slightly elevated. Within a year they increased in size, while new ones gradually developed until the upper portion of the face presented a mottled-red appearance, with here and there slight scaling. Two years ago the patient was pregnant again for about two weeks (as alleged by a midwife) and during this period the eruption on the face became redder. Upon the return of menstruation the face grew paler and looked much better than before the irregular menstruation. About this time a few lesions similar to those on the face, though somewhat smaller, appeared on the left chest and upper portion of the left arm. Since then new lesions have developed upon the chin and lower portions of the left cheek.

When first seen at the New York Skin and Cancer Hospital over a year ago, the patient was evidently in good general condition and had remained so throughout the course of the disease. Her digestion was excellent and she slept well. The circulation was not perfect, as shown by a chronic passive hyperæmia of the hands and a tendency to cold feet. Examination of the blood and urine showed nothing abnormal. A tuberculin test (von Pirquet) was followed by a slight reaction. The Wassermann test was negative. At this time the clinical diagnosis was that of an unusual form of erythematous lupus. At a meeting of the New York Dermatological Society in October, 1909, the patient was presented and several members thought that the eruption might be syphilitic. At a later meeting, after three months of "mixed treatment" she had shown but little if any improvement and the diagnosis of lues was forsaken and the question of lepra was considered. Lotio alba was prescribed at the hospital clinic and was followed by a slight improvement in the patient's appearance. The dull-red hue of the tumors was decidedly lessened, but there still remained a lumpy condition with some pigmentation and a marked venous congestion on exposure to cold. Most of the lesions had extended peripherally and had a depressed centre. They were discolored and varied from a small pea to a bean in size and were always more prominent at each menstrual period. The eruption persisted until a series of injections of arsenate of soda was given, when a notable improvement took place. A four per cent. solution was used, the dose being increased stead-



ily from five to twenty minims and then steadily decreased. About forty injections were made during a period of two months.

When the patient was last examined (Feb. 15, 1911), the face presented, at first glance, a somewhat uneven appearance. There were numerous elevations upon the forehead and cheeks, interspersed with atrophic pits and hollows of varying size and form. Some of these were pigmented and some of recent development were of a faint reddish hue (Fig. 1). Though these looked like cicatrices, there had never been any ulceration throughout the course of the disease. Here and there a slight induration or flattened nodule could be felt upon passing the finger over the surface, but there was a notable absence of the firm tumors which were present a year ago. Upon the deltoid region of the left arm there was a slight mottling of the skin where the eruption had practically disappeared.

Two lesions were removed from this patient; one, a bean-sized infiltrate from the left cheek, and a second, of about the same size, from the forehead. The sections were run through alcohol of increasing strength, blocked in celloidin and stained with eosin-haematoxylin, polychrome-methylene blue, orcein-polychrome-methylene blue and methyl-green-pyronin (Unna-Pappenheim). It must be remarked at this juncture that the two lesions did not show identical pictures. The difference lay in the presence in the cheek tumor of a fair number of giant cells, whereas in the lesion from the forehead, giant cells were of extremely rare occurrence. From this fact we conclude that the cheek lesion represented an older focus. In other respects the lesions were histologically identical and they presented the following picture:

The epithelium, except for a slight thinning in places, shows no change from the normal; the papillary layer is likewise normal. Beginning about the level of the base of the sebaceous glands and extending through the entire remainder of the derma and including the subdermal fat, are circumscribed nodules and more diffuse masses of cells, separated from each other by trabeculae of connective tissue; indeed, some are almost seen encapsulated by connective tissue fibres (Fig. 2). In places the infiltrate surrounds blood vessels, in others it is found completely enclosing sweat coils and a large nerve trunk, seen in cross section, is also closely pressed upon by the infiltrating cells. In no instance, however, is the structure of either gland, nerve or vessel invaded by the new growth, nor is there any evidence of pressure atrophy of these structures. This fact, as characteristic and illustrating the benignity of the lesion has been noted and described by Boeck, Kren and Weidenfeld<sup>18</sup> and others. Under high power the predominating cell is seen to be a young connective tissue cell with a large vacuolated nucleus and a small amount of protoplasm (Fig. 3). It must be remarked here that under the low power the predominating cell appears to be a large lymphocyte; careful study, however, reveals not this cell but an unusually small type of the epithelioid

cell. Many larger epithelioid cells also occur, a number of plasma cells and a much larger number of lymphocytic elements than has been described in other cases of sarcoid. Indeed the scarcity of this cell is spoken of by Boeck and others as quite characteristic for the histopathology of the lesion. Giant cells are present in fair numbers in the lesion from the cheek, but are extremely few in the lesion from the forehead. They are of two types, the larger number seems to be due to degeneration of a few closely clumped cells, with retention of their nuclei (Fig. 3); in addition to these, however, a few Langhan giant cells do occur. An arrangement into typical tubercles, resembling tuberculosis, is seen in some of the nodules from the older lesion. A curious feature, and one described as characteristic for the lesion, was demonstrated in sections stained for connective tissue. The elastica is pushed aside and upward by the advancing nodules so that the subpapillary layer is seen as a dense mass of elastic fibres. Within the nodule itself are seen numerous fine capillaries and small vessels, and the elastic tissue representing their walls is the only remnant of this tissue remaining within the infiltrating mass. In not any single instance is there any evidence of caseation or necrosis, as in tuberculosis. Bacteria were entirely absent in all the sections examined.

To sum up briefly, we are dealing clinically with a case of extremely chronic, benign, non-ulcerating tumor formation, the lesions occurring in an otherwise healthy woman, occupying the face, neck, shoulders, and outer side of the upper arm and disclosing themselves as pea to almond-sized, red or violet colored infiltrations, which under the influence of arsenic tend to disappear, leaving as a residue brownish pigmented, slightly atrophic areas. Under glass pressure the lesions reveal themselves as composed of several minute, brownish-yellow foci. In every single detail this description tallies with the form "en plaques" of the Boeck type of sarcoid; the clinical diagnosis is thus unquestionable. The histological picture, however, does not agree in every respect with the Boeck type of sarcoid. Notably is this the fact in the presence in our case of a relatively large number of lymphocytes and an unusually small type of the predominating connective tissue cell. The tumor under the low power does resemble a lymphogranuloma, rather than a connective tissue tumor, but careful study under greater magnification reveals the fact that this picture is only apparent and that connective tissue elements do predominate. Darier, who has seen slides from our case, regards the microscopic picture as an example of atypical sarcoid. A case not unlike our own in its histopathology is described by Urban.<sup>19</sup>

A word might here be interposed as to nomenclature. The great resemblance to tuberculosis in structure and the presence, macro-

scopically, of the miliary foci, has led Boeck to rename the lesion "benign miliary lupoid." While the ætiology is still in doubt, the name lupoid is open to the same objection as that of sarcoid. It has the advantage, however, of separating the disease from the older Kaposi sarcoid, which, while it includes undoubtedly under this heading the lupoid tumor, included also other neoplasmata which had nothing to do with the disease in question. The name benign miliary lupoid, therefore, is to be preferred to the term sarcoid.

The theory that the sarcoid is a tuberculide or possibly due to a low-grade infection with the tubercle bacilli, was advanced by Darier and Roussy. The theory is based on the histopathology mainly. The weight of clinical evidence it must be admitted is against rather than for this view. There are about thirty-one cases in the entire literature. In only one of these were acid-fast bacilli found (Boeck) and in this instance not in the lesion, but in the nasal secretion and it seems by no means sure that they were tubercle bacilli. Winckler,<sup>20</sup> in an analysis of seventeen cases, found positive evidence of tuberculosis elsewhere in the body in six cases; against this, however, is the fact that only about one-third of the entire number of the thirty-one cases reacted positively to tuberculin. In the five cases of Darier, Kreibich,<sup>21</sup> and Opificius,<sup>22</sup> although positive tuberculin tests were elicited, careful inoculation experiments failed to demonstrate the tuberculous nature of the disease. It is quite conceivable that in these cases the patients may have had tuberculous foci elsewhere in the body, entirely independent of their sarcoid condition. A single positive inoculation experiment, however, is recorded by Morawetz.<sup>23</sup>

On the other hand Kren and Weidenfeld<sup>18</sup> inoculated twelve guinea pigs from their two cases, all unsuccessfully for tuberculosis; furthermore, none of the inoculated animals reacted to tuberculin administered one or two months after inoculation. In Boeck's eight cases none reacted positively to tuberculin. A point much against the tuberculous nature of the disease is the entire absence of ulceration and necrosis in contrast to other forms of cutaneous and visceral tuberculosis, and, moreover, differing thus from the tuberculides in which necrosis is the rule. The therapeutic result of arsenic in the treatment of the disease, has, we believe, no analogy in other tuberculous processes. In view of these facts, therefore, one must conclude that although some of the sarcoid cases seem to stand in certain relation to tuberculosis, the entire group must, until a closer relationship is established, be regarded as connective tissue tumors of obscure ætiology.

The prognosis as regards life in the sarcoids is good. Only two cases, those of Mazza,<sup>24</sup> terminated fatally and in one of these, at least, the patient's age at the time of the disease (64 years), without doubt was the important factor in the fatal issue. An extremely interesting and inexplicable fact is the large predominance of women affected as against men; of the thirty-one cases (including our own) twenty-three were females. The analogy in this respect to Bazin's disease is suggestive.

From a purely objective standpoint, leprosy, leukæmia cutis, syphilis, lupus erythematosus nodularis, erythema induratum and lupus pernio must be differentiated when studying a case of sarcoid. The typical history and unique histopathology of sarcoid, however, together with the characteristics of the other diseases brought out in their histories, readily enable one to establish the diagnosis. Aside from the remarkable therapeutic effect of arsenic before mentioned, the X-ray, calomel, and tuberculin are reported by Darier as causing the lesions to disappear.

The pathological work in connection with this paper was undertaken in the laboratory of the Beth Israel Hospital. For the privileges of the laboratory the authors are indebted to the courtesy of Dr. E. Moschicowitz.

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Fig. 1.  
Sarcoid.







Fig. 2.  
Sarcoid.

Showing small type of epithelioid cell.

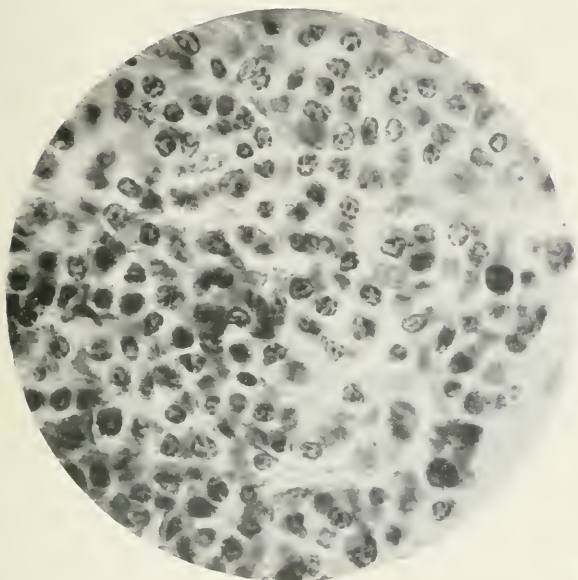


Fig. 3.  
Sarcoid.

Showing sarcoid nodules separated by connective tissue septa.

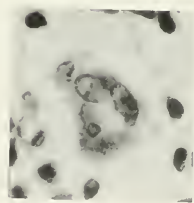


Fig. 4.  
Sarcoid.

Giant cell from centre of nodule.



## DISCUSSION.

DR. POLLITZER said that this contribution of Drs. Fox and Wile, upon the subject of sarcoid tumors of the skin, was especially welcome because it presented in such a complete manner both the clinical and histological features of a case of this kind. Of course, the last word on the subject had not been said, although we had learned a good deal about these so-called sarcoid tumors, chiefly through the studies of Darier. The histological resemblance of the growths to tuberculosis, was perhaps their most interesting feature. Dr. Pollitzer said that when he saw Dr. Fox's patient about a year or so ago, he did not get the impression that it was clinically a case of sarcoid. The common skin lesion in sarcoid was a flat or irregularly discoidal infiltration of the skin, while in this case the lesions were deeply seated, and were rounded and apparently spherical in outline. That, however, was a matter of no very great importance in view of the microscopic structure of the lesions which he had had an opportunity of inspecting.

The case, he understood, improved very rapidly under arsenic, and practically recovered. While this was the rule, one should not get the impression that arsenic might be looked upon as an absolutely specific therapeutic test in this disease, as mercury was in syphilis. While arsenic cured a large proportion of these patients, it failed in some instances. The speaker said that in the case which he presented at the International Dermatological Congress in New York a few years ago, the patient failed to improve at all under arsenic, in spite of large doses hypodermatically and long-continued treatment. That patient had since died of tuberculosis.

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## HISTOLOGICAL CHANGES OCCURRING AT THE SITE OF INJECTION OF 0.6 GRAM OF SALVARSAN.

By E. D. LOVEJOY, A.B., M.D., New York.

Assistant Surgeon, Department of Dermatology,  
Cornell University Medical School.

THE patient, a young woman, suffering from late secondary manifestations of syphilis, was given a subcutaneous injection of 0.6 gram of "606." The drug was administered in the form of a neutral solution and injected at the lower border of the scapula. The history of the case immediately following the injection was uneventful—the pain was slight, the usual amount of induration occurred, and the luetic lesions yielded promptly to the treatment.

At the end of about three months the indurated nodule at the site of injection became reddened and soft on palpation, while the skin covering it became thinned and showed signs of breaking down; there was, however, absolutely no pain.

At the end of about another month the skin over the apex of the nodule broke down, leaving a rather deep, punched-out ulcer about the size of a fifty-cent piece. The base of the ulcer consisted of a

hard, fibrous, circumscribed mass, closely attached to the surrounding tissue. For the first few days there was a slight sero-purulent discharge, but that was easily dried up by aseptic dressing.

The tissue under examination came from the base of the ulcer, the entire mass having been removed to promote healing, and was obtained through the courtesy of Dr. A. E. Gallant.

The illustration, which gives the appearance of the specimen under low power, shows the granules of "606" lying in a number of adjacent locules which have apparently been mechanically formed by the pressure and force of the injection—some few grains are scattered over the tissue, but this is due to the action of the microtome—also, each locule in situ, was probably completely filled with the "606" granules, but the centre has been lost during the preparation of the specimen. Surrounding these locules the tissue shows marked evidence of degeneration.

Under the higher power, the evidences of degeneration are more manifest. The elastin has largely disappeared except for occasional degenerating fibres to be found well removed from the locules—the connective tissue also shows similar degenerative changes and proportionate decrease. The fibrous tissue, however, has undergone a relative, if not an actual increase, and largely predominates in the tissue element, appearing most conspicuously around the locular walls.

An examination of the blood vessels reveals the cause of the necrosis, for they are found to be filled with "606" granules, especially the smaller vessels and lymphatics which are completely blocked, while the vessel walls show a thinning and degeneration corresponding to that observed in the other tissues.

The fat cells alone seem to remain practically unharmed.

A peculiar feature of the entire process is the marked absence of any round-celled infiltration or evidences of inflammatory reaction. The only inflammation which occurred, seemed to have been confined to the upper layers of the skin covering the nodule and not to have penetrated into the nodular mass itself.

Undoubtedly the necrotic process had been slowly progressing for over a month, all possible absorption having taken place and it only required the complete obliteration of the vessels before the tissue broke down in an effort to rid itself of a foreign body which it was unable to absorb.

For the preparation of the specimens I am indebted to Dr. W. J. Heilmann, who successfully handled rather difficult material.



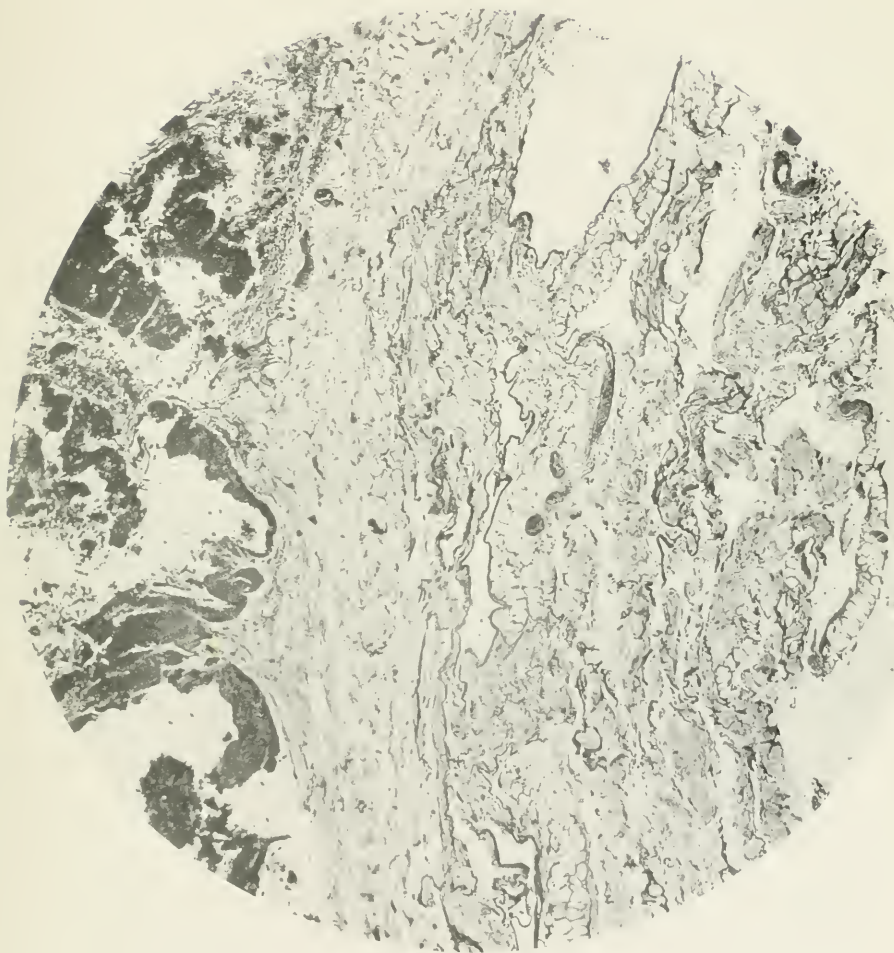


Fig. 1.

Salvarsan.

Showing locules containing granules of "606," and evidence of tissue degeneration.



## SOCIETY TRANSACTIONS.

## NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, February 28, 1911.

WILLIAM B. TRIMBLE, M.D., *President*.

## Child with Small Tumor on the Nose. Presented by DR. JACKSON.

The patient was a girl six years old. The mother stated that eighteen months before coming to the clinic the child had stuck a pen containing ink into the tip of the nose. The black spot left by this faded away in due time. About six months afterward there appeared, at the site of the injury, the present tumor, which had persisted and shown a tendency to increase in size. At the time of presenting the case, the tumor was about the size of a French pea, black in color, and distinctly raised above the level of the skin. The opinion of the members was asked as to whether it was a melano-sarcoma or not; and as to the propriety of cutting it out.

DR. JOHNSTON said that it seemed to be a pigmented growth in the epidermis. He had several times been deceived by such lesions, thinking that they were moles and were growing, but in every case they had turned out to be pigmented epithelial tumors, keratoma, rodent ulcer, etc. The present tumor could probably be removed without any trouble, but there seemed to be no need for doing this at present, unless there was danger of the case falling into the hands of some one who would not do it properly.

DR. WINFIELD said he saw no reason for not operating at once and removing the deformity from the child's face.

DR. SHERWELL agreed with Dr. Johnston about the condition as to its being non-malignant and suggested the use of a small Keyes punch to take the tumor out. If removed in that way it would probably leave a very minute dimple, about the size of the shaft of a pin.

DR. ROBINSON expressed the opinion that the pigment was in the epidermis. It could be either removed with an instrument or with an acid. If it were sarcomatous or epitheliomatous, it should be promptly ablated.

DR. KINGSBURY did not regard it as malignant, and approved of Dr. Sherwell's suggestion for treatment.

DR. JACKSON said that he was obliged to the gentlemen for the expression of their opinions. Acting on it he would have the growth removed; would submit it to the pathologist of his clinic, Dr. MacMurtry; and report on his findings at the next meeting. He believed that the tumor was a melanotic sarcoma.

## Disfiguring Cicatrices Following a Plastic Operation. Presented by DR.

FORDYCE.

The patient was a German woman, forty-three years of age, who gave a history of having had an epithelioma on the tip of her nose twelve

years ago. This was treated by various cauterizing agents and finally the X-ray was resorted to. The lesion healed and remained so for about five years when it again broke down. The X-ray was again tried but this time had no effect. She was admitted to the hospital and repeatedly curetted until the lesion was thought to be in a sufficiently good condition for a plastic operation. The case illustrated the injurious results that may follow a plastic operation upon a syphilitic or cancerous base.

DR. TRIMBLE said that the case in question showed very well the uselessness of a plastic operation on a syphilitic-epitheliomatous base. The resulting deformity was generally very bad.

DR. FORDYCE said that the results obtained by surgical operations on epitheliomata of the face were no more favorable than those obtained by the employment of dermatological methods. He had seen several cases where surgeons had excised epitheliomata of the face and had performed plastic operations to replace the excised tissue. After such interference recurrences were just as frequent as after dermatological procedures.

### **Hypertrophic Lichen Planus.** Presented by DR. FORDYCE.

The patient was a woman, forty-two years of age, a native of Ireland. The condition had existed for seven months. On the outer aspect of the right thigh there was a group of lesions varying in size from a pea to a ten-cent-piece, elevated, sharply circumscribed and warty in character. Similar lesions were scattered irregularly over her back, presenting an identical appearance with those on the thigh. The chief point of interest in the case was the presence of hypertrophic lichen on the back where such lesions were seldom met with.

DR. GEORGE HENRY FOX said that he had never seen hypertrophic lichen planus to such an extent on the back, and inquired whether any of the other members had seen such a case.

DR. MORROW said that he had seen a case where the lesions were quite as widespread. They were practically universal. Dr. Keyes might remember the case, which had been referred to him by a physician of Louisville, Ky. The lesions were all over the body. After she had gotten rid of the lesions over the general surface of the body they still persisted on the back and buttocks; these were very large and almost like tumors; most pronounced just below the waist line and forming elevated plaques probably as large as the palm of the hand on either side. The patient finally was cured.

DR. KEYES said he had seen a similar case on a man who had a progressive generalized lichen planus. He had extensive lesions on the back. He eventually recovered.

DR. TRIMBLE said that he had sent the case up from the clinic mainly because of the lesions on the back. He recalled a case shown by Dr. Jackson at a former meeting of the Society; a young woman of twenty-two or three who had a group of lesions on the outer aspect of the thigh, which corresponded closely to the lesions in this case. Dr. Jackson had presented the case as one of multiple itching tumors of the skin. Some of the members thought the lesions were those of hypertrophic lichen, but most of them agreed with the former diagnosis.

**Results of X-Ray Treatment for Acne.** Presented by DR. SHERWELL.

R. L. W., eighteen years of age. The patient had been troubled with acne, and in March of last year was treated by a doctor who applied the X-rays nine times—at first, six treatments were given on six consecutive nights, then three single exposures every other night. At each treatment the rays were applied for a minute then withdrawn and reapplied, for four or five minutes in all. This was followed by an erythema, then weeping, and a sore lip, and then the atrophy as now seen. The superficial tissues and, to a certain extent, the subcutaneous tissues were affected. The man was anxious to know whether the condition would be permanent, and the case was presented to get an expression of opinion as to an improvement of the condition, and an increase of the subcutaneous tissue which was so much atrophied.

Dr. JACKSON said that he thought there was no hope of improvement in the appearance of the scars. He had seen several such cases, and after some years they were just as bad as at first.

Dr. FORDYCE expressed the opinion that part of the condition was due to atrophy of the sebaceous glands. As this region of the face was well supplied with these structures and as the X-ray acted primarily on the glands he believed that a large part of the atrophy was produced by their destruction.

Dr. ROBINSON agreed with Dr. Jackson that the prognosis was unfavorable. The interesting point was the small number of treatments the man had had—that he should have had such results from that number of short exposures. It was a very unusual result for that number of applications, though it was just such a condition as so frequently occurred after repeated exposures even with long intervals between them. There was very little, if any, hope of improvement from the present condition.

Dr. GEORGE HENRY FOX agreed with Dr. Robinson that the condition would not improve. While some cases of acne might be benefited by the X-ray, the result of such treatment was very uncertain. He had seen some very bad results occurring after a few applications. The disease was of such a trifling nature and as it was amenable to other means of treatment, the X-ray should not be recommended for general use in such conditions, even by the most skilled operator.

Dr. MORROW said that he had seen a case some five or six years ago showing the result of X-ray treatment for eczema on the leg. There were distinct burns, followed by loss of tissue, and the patient wished to bring an action against the physician who had subjected him to the treatment. It had only been used about four times, but the fourth application was made after the burn was somewhat pronounced. The case was under observation for two years before it got entirely well, but the atrophy of the tissues was just as pronounced today as when the burn first healed, and probably would remain so forever. One could hardly expect a reparative process under such conditions.

Dr. WINFIELD also thought there would be no chance of repair. He agreed with Dr. Fox that sometimes a very slight exposure would bring about such a result. It seemed to be an idiosyncrasy—some persons would tolerate a tremendous amount, and others could stand very little.

Dr. HOWARD FOX said that the case shown to-night would tend to confirm his habit of very rarely treating acne of the face with the X-ray. He would only use this method of treatment in extremely bad cases of acne indurata. In acne of the back, however, he would not hesitate to use the X-ray, as in this location the formation of telangiectases would not be a matter of such great importance.



Dr. KINGSBURY agreed with what had been said by the previous speakers, but thought that the man might possibly have further trouble. It was only a year since he had had the exposures and considering the amount of damage done to the skin it would not be surprising if pigmented areas, as well as telangiectasia, were to develop later.

Dr. TRIMBLE said the fact that the atrophy had exhibited itself clinically in a punctate form would make him agree with Dr. Fordyce, that it meant atrophy of the sebaceous glands. He also agreed with what had been said about the prognosis.

Dr. SHERWELL said that he believed the condition might become even more pronounced, and that no reconstruction of tissue could be expected. Moreover, there was a spot on the upper lip which had been affected, and he would not be surprised if later there were some degeneration there, although the patient was a very young man. He recalled a case where a fairly moderate exposure caused a very serious condition. The man was being exposed for a radiograph for kidney trouble, possibly calculus. He had some affection of the kidney or bladder and was exposed to the radiation twice for about ten minutes, and he had a most extensive burn which took a long time to heal. It was followed by those peculiar telangiectases, so well known, and epitheliomatous degeneration in the centre. This was removed by the speaker's favorite method and had never reappeared. There was a most typical epitheliomatous degeneration in the middle of the scar.

#### **Pigmented Sarcoma. Presented by Dr. JACKSON.**

The patient, who had been previously shown at the mid-winter meeting of the American Dermatological Association in New York last December, had just been put under treatment with bichloride applications, beginning with a dilution of 1-2,000., saturating the cloths a number of times a day and gradually increasing the strength. This was instituted about ten days ago, and the patient said she was feeling much better. Dr. Wallhauser of Newark had reported three cases showing remarkable results under this treatment.

#### **Case for Diagnosis. Presented by Dr. FORDYCE.**

The patient was a Roumanian girl, twenty-six years old, who presented a group of small, purplish-colored, nodular lesions in the centre of her forehead, on her cheek and on the left arm. The lesion on the cheek was about the size of a silver half dollar, somewhat atrophic, and suggested in some respects a patch of morphaea. The history which the patient gave was rather indefinite, but she stated that the condition began about six years ago, that the lesions apparently would disappear and then recur, and that they were pruritic.

Dr. ROBINSON said that the case was a most interesting one and he was much pleased to have seen it. Of course he could not make a diagnosis off-hand, and he hoped that Dr. Fordyce would report on it later.

Dr. GEORGE HENRY FOX inclined to the belief that it was a sarcoid. It appeared to him to be a duplicate of a case he had had under observation for fifteen or twenty years, and which he had presented to the Society several years ago. His patient had red, elevated, smooth patches on the cheek, suggesting cry-

thema perstans. At first he thought it an anomalous form of erythematous lupus, but that diagnosis was abandoned. The various methods of treatment tried had little or no effect, and the woman was not yet cured. It was also similar to the case diagnosed as sarcoid, shown at the recent meeting of the American Dermatological Association. This was the tubercular type of the disease, while in the other case there were larger erythematous plaques, sometimes patches, occasionally becoming red and swollen. Under the microscope the two were not exactly alike, so he had not reported them together—one being the type described by Darier and the other the Boeck type. As he understood the history of Dr. Fordyce's patient, the disease was of the same nature as that of the patient to whom he referred. In each of the cases there were patches on the arm in the deltoid region.

DR. MORROW said that as Dr. Fox was speaking the idea suggested itself to him that the condition might have a microbic element—it might be an inchoate mycosis fungoides or something of that kind. It might be of a sarcoid nature as Dr. Fox had said, but it was a very slight commencement for so grave an affair.

DR. HOWARD FOX had recently had the opportunity of studying the case of sarcoid to which his father had referred. He agreed that there was a striking similarity between the two cases in the appearance and location of the lesions.

DR. FORDYCE said that he had not studied sarcoid very closely, but that Dr. Fox's diagnosis would probably cover the case very well.

#### Alopecia Areata. Presented by DR. KINGSBURY.

The patient was a saleswoman, thirty-nine years of age. About one year ago several small bald areas developed on the back of her scalp. These remained practically stationary until a few months ago, when they enlarged very considerably and new patches appeared. When presented, over half of the scalp was hairless and the woman stated that recently she had daily been losing a large quantity of hair. Her eyebrows were but slightly affected.

DR. JOHNSON said that as the disease was still spreading he would think that the immediate prognosis was pretty bad at that age.

DR. SHERWELL considered the case a true alopecia areata and one probably due to some reflected neurotic condition—tropho-neurosis, in short. He cited two cases in which he firmly believed that perverted sexual living had caused the condition of alopecia. Both were married females. In one the condition was total and absolute, even the eyebrows and eyelashes being absent; in the other, it was confined largely to the scalp. Both were relatively young, seemingly well-nourished, healthy women, otherwise without a semblance of a dyscrasic state. They did not wish to have children. His advice as to marital conditions, however, was followed. In both cases, in about a year subsequently, childbirth occurred; one was markedly benefited, the other entirely recovered, coincidently with a resumption of their normal sexual life.

DR. MORROW inquired whether Dr. Sherwell's theory would apply to the other sex also? As a rule, the prognosis in such cases was good, unless there had been a very rapid and total loss of the hair. Almost every case that had come under his observation for a good many years had resulted in a cure. Recently one of his patients, a man of fifty-five, with a very thick head of hair, had a very marked alopecia, and under treatment the result was very satisfactory in the course of two months.

DR. GEORGE HENRY FOX said that he did not think the prognosis was necessarily good or bad, but that it was uncertain. He had seen cases where the hair had fallen until complete baldness resulted. All the members could recall prominent men in the community who suffered from this condition although they had had the best of treatment. On the other hand, he had seen cases of women the age of this one where the results were most satisfactory, not from any special skill in the treatment, but simply by improvement of the general health; the hair had grown in again normally without any relapse. As to treatment, local parasiticide applications, beyond the stimulation which was somewhat beneficial, often had very little result. Improvement of the general health of the patient would do much in causing the hair to return. Some cases which appeared the most favorable often proved to be the most rebellious to treatment. He had seen cases fail to respond where he was most anxious to effect a cure and had done everything he could think of; whereas other cases, especially in children, with no treatment whatever, had had a speedy return of the hair.

DR. MORROW asked if Dr. Fox could give a percentage of the cases which he had treated which resulted in a cure? Dr. Fox replied that about ninety per cent.—taking both children and adults, had a tendency to get well spontaneously.

The speaker then said that in his hospital and private practice he had seen more than a hundred cases of well-marked alopecia areata and would say that certainly ninety per cent., perhaps ninety-five per cent. had recovered. He could recall only one or two cases that did not do so. He believed that under stimulating treatment thoroughly applied, a recovery could usually be expected.

DR. ROBINSON said that Dr. Morrow's remarks went to show how experiences differed. The speaker considered all of these cases as parasitic—not only from the manner of the spread of the condition—but from the histological characters. The prognosis would depend on the amount of changes that had already taken place in the skin. In 1885, Dr. Bulkley had sent him a portion of skin from a case of alopecia areata and he made a report that the patient would never have a return of the hair as the hair follicles in the sections examined were destroyed from the inflammatory process. One would see such cases of destruction now and then, though in the vast majority the follicle remained and was able to reproduce hair. As to the treatment, one could safely say that with anti-parasitic agents ninety per cent. could be cured promptly, if the spots were seen early and limited to only one or two on the scalp, and there was no tendency to the formation of new lesions. Ten days or two weeks was usually long enough to treat these cases, if they had not lasted too long or the soil specially favorable for the microbes. He preferred chrysarobin applied once a day for ten days, then stopping. As long as one could see lanugo hairs on the area affected the prognosis could be considered favorable.

DR. JACKSON said that the aetiology and treatment suggested by Dr. Sherwell were unique and new to him. He had met with no mention of them in his reading. Still, there was undoubtedly some relation between the female organs of generation and the hair. We all were aware of the fact that hair often would appear on the face of a woman at the time of the menopause. He had seen at least one case of alopecia areata in a girl that was complete for some years, which at the time of puberty recovered entirely. He did not consider it unusual for a person of thirty-eight years to have this disease. Though the condition in Dr. Kingsbury's case was still spreading, the prognosis as to recovery was good. In regard to the treatment, Dr. Robinson had placed considerable importance upon the use of chrysarobin, and regarded its undoubted curative effect as due to its anti-parasitic action. If one employed a strong preparation of it for ten days it would cause pretty active stimulation, and that might well be the explanation of its effect without its being in any way due to its anti-parasitic action. The more he used

Piffard's iron-electrode lamp, the more he was sure of its absolute curative effect in this disease. He had reported several cases showing this. In one, which was of special importance, he had caused the hair to grow on one side of a perfectly bald scalp, the side on which the lamp was used, the other side remaining bald. Not only did the hair come in, but it came in of normal color. This was the experience of others who had used such a lamp.

DR. GEORGE HENRY FOX said that for many years he had used strong aqua ammonia which was not a parasiticide, and oleate of mercury, which was a parasiticide. In every case he had used one or both of these, in alternation or at the same time. He had also used one on one side and the other on the other side, and had never seen any advantage in one over the other. If alopecia were a parasitic condition, the oleate of mercury ought to be more beneficial than the other. In most cases the improvement was secured by stimulating the scalp and drawing the nutrition to the hair. He wished he could cure all of his cases of alopecia areata as quickly as Dr. Robinson did.

DR. ROBINSON inquired if anyone had treated ringworm with stimulating preparations. He called them injurious agents.

DR. GEORGE HENRY FOX replied that he had used croton oil, years ago.

DR. KINGSBURY said that he thought the patient would eventually recover her hair, and that he had presented the case more especially to ascertain the opinion of the members as to whether the alopecia would become complete. From the amount of hair that she had recently lost he judged that it was a progressive case and that she would probably lose considerably more. Regarding the ætiology of the disease, the speaker said that it was his belief that in many cases eyestrain was a factor of great importance. This woman had very decided myopia with astigmatism, which had but lately been corrected by lenses.

### Epithelioma Cured by Fulguration. Presented by DR. FORDYCE.

The patient was a woman, forty-three years of age, and an American by birth. Eight years ago she developed a cutaneous epithelioma one inch below the right inner canthus. It was at first treated with liquid air, three times in all, but a recurrence was evident very soon after each application. She then received X-ray treatment for a period of several months without benefit. In October, 1908, the patient presented herself at the University and Bellevue Clinic, at which time there was an ulcer about the size of a ten-cent-piece with a pearly border. One application of the high-frequency spark was made by Dr. MacKee, the duration being not more than five seconds. This was followed by a slough which healed in two weeks, leaving a white, pliable scar. There had been no evidence of recurrence up to the present time.

DR. JACKSON said that the result was very good. Some time ago he had used the high-frequency spark from his original apparatus, and had given it up because he failed to get good results. Recently he had had a new apparatus giving a more powerful spark installed. He had used it with good result in one case of lupus vulgaris, and in one of a deep-purple, port-wine mark. The spark penetrated in a second or two deeply into the tubercles, and seemingly destroyed them. The color of the nœvus had also been much reduced. The spark was painful, but it was of such brief duration that it was negligible. If the patient's feet were placed on a wooden foot stool contraction of the muscles was avoided.

**Lupus Vulgaris Treated with Tuberculin.** Presented by DR. FORDYCE.

Dr. Fordyce said that Dr. MacKee had been treating cases of cutaneous tuberculosis, tuberculides, etc., at the College Clinic with tuberculin. This case was one of the first to be treated. The patient was an Irish woman, thirty-two years of age. The family and past personal histories were negative. She first came under observation three years ago, at which time there was a lesion on the flexor surface of the right forearm five inches in length by two and a half inches in width. There was considerable ulceration, crusting and atrophy and the entire area was studded with typical apple-jelly nodules. The Moro tuberculin test was positive.

She was at first treated with the X-ray and later with the solid carbon dioxide with only temporary improvement. The tuberculin treatment was substituted in November, 1910, and the improvement was immediate and progressive. The bacillus emulsion was employed, in weekly doses, beginning with 0.00001 mg. and increasing geometrically by 25 per cent. at each sitting. When presented to the Society, the patient exhibited a smooth, atrophic lesion possessing very little color and with very little evidence of the remains of former nodules.

Dr. WINFIELD said that he had a case which was being treated by the same method with increased benefit. The treatment was begun with 0.000005 mg. and increased 10 per cent. a week.

Dr. FORDYCE referred to the possible association of mucous membrane lesions with the so-called tuberculide of the skin. He had seen two cases in which this coexistence was observed. In one of them he had made a von Pirquet test and had obtained a very marked reaction. The mucous membrane lesions were met with on the side of the tongue and inner side of the cheeks and were observed as rather sharply circumscribed punched-out ulcers which healed slowly.

**Vitiligo, Lupus Erythematosus and Scrofuloderma, in American Indians**  
(Photographs). Presented by DR. HOWARD FOX.

Dr. Howard Fox presented photographs (kindly sent by Dr. E. S. Lain of Oklahoma City) of vitiligo, lupus erythematosus and scrofuloderma, occurring in American Indians.

**New Apparatus for Intravenous Injections of Salvarsan.** Presented by

DR. HOWARD FOX and DR. TRIMBLE.

Dr. Fox and Dr. Trimble demonstrated a simple form of gravity apparatus for giving intravenous injections of salvarsan. (See *Medical Record*, March 10, 1911.)



NEW YORK ACADEMY OF MEDICINE, SECTION ON  
DERMATOLOGY.

Stated Meeting, held November 1, 1910.

SIGMUND POLLITZER, M.D., *Chairman*.**Psoriasis.** Presented by DR. PAROUNAGIAN.

This little patient was three and a half years old. He came to Dr. Pollitzer's clinic at the New York Post-Graduate Hospital, with typical psoriatic lesions at the characteristic locations. The interesting features were the development of the disease at the age of one and a half years, and the fact that the patches were of the inveterate type.

DR. POLLITZER said that the intensity and the infiltration of the lesions in this case were quite remarkable for so young a child.

**Lymphangioma Tuberosum Multiplex.** Presented by DR. NEWMAN.

Dr. Newman presented the case with the tentative diagnosis of lymphangioma tuberosum multiplex because of the presence of numerous scars and the absence of lesions from the face and scalp, and because the lesions were distinctly colored, not tender on pressure, and not accompanied by paroxysmal neuralgias. There had been no histological examination. The patient was a physician, twenty-three years of age; neither of his parents were similarly afflicted. The eruption was first noticed when he was one or two years of age, a few lesions appearing on his body, gradually increasing in numbers, particularly on the abdomen. He thought a few had appeared in the last year or two. The eruption involved a region beginning some two inches below the clavicle and extending downward to slightly below the umbilicus. On the back about the same space was occupied, but far fewer lesions were observed. There were a few on each arm. The lesions were rounded, oval or elongated and fairly firm to the touch; their color varied—yellowish-pink, brownish and purplish; one lesion on the abdomen seemed somewhat translucent, and on some of the purplish lesions, with a diascope, one could see what seemed to be very small translucent milia. Some of the lesions appeared to have united with one another and formed elongated patches. No telangiectases were demonstrable. All over the affected region and outside thereof were a large number of pigmented macules which looked not unlike a chromophytosis; there were two fairly large ones in the lumbar region and a small one over the right temporal region. Rubbing briskly brought out the purplish color of many of the lesions and a large number of flat or slightly depressed cicatrices caused probably by the involution

of former lesions. The patient stated that the affected parts did not sweat as freely as the unaffected.

DR. OULMANN said that this was a case of von Recklinghausen's disease.

DR. POLLITZER was also of the opinion that this was a case of von Recklinghausen's disease. He called attention especially to the characteristic pigmentation.

#### **Ichthyosis.** Presented by DR. MACKEE.

The patient, a young girl with a marked, generalized ichthyosis had been presented by Dr. Fordyce at the New York Dermatological Society in October, 1910. The additional point of interest ascertained was that a younger sister was affected with a mild example of the same disease.

#### **Epithelioma.** Presented by DR. MACKEE.

The patient was a man fifty-eight years of age, and a real estate broker by occupation. The only point of dermatological interest in his history was the fact that four members of his family (mother, sister, and two uncles) had had malignant growths. Seven years ago a very small, scaly papule developed on the inner surface of the auricle of the left ear. Three years later it had attained the size of a split pea, but was still of the same character. At this time he received X-ray treatment over a period of a year, which procedure resulted in a mild dermatitis. The character of the lesion then changed from that of a papule to an open ulcer and attained the size of a twenty-five cent piece. During the past two or three years the lesion would heal and remain well for a few weeks or months and then recur in exactly the same location. The patient first came under Dr. MacKee's observation one year ago, at which time there was a superficial excoriation of about the size of a silver quarter, which would bleed under the slightest provocation, but there was no evidence of a purulent discharge. On three occasions, during the past year, the wound had healed, only to again recur. The first time, the cicatrization was apparently the result of soothing applications, the next favorable result was apparently from the use of a mild caustic, and the third healing was spontaneous. On one occasion a single application of the X-ray was made, which resulted in a slight erythema and which quickly subsided without any observable effect on the lesion. At no time during the year in which the patient had been under the speaker's observation had there been the slightest evidence of a pearly nodule. The lesion had simply resembled an excoriation, was very pruritic, and was usually covered with a blood crust. Although the speaker favored a diagnosis of epithelioma, it was also necessary to consider the possibility of a relapsing radiodermatitis.\*

\*Since the presentation of this case, three small pearly nodules made their appearance, confirming the diagnosis of epithelioma.

**Senile Angioma of the Lower Lip.** Presented by DR. MACKEE.

The patient, a man fifty years of age, was from Dr. Fordyce's clinic. He presented two typical angiomata on the mucous surface of the lower lip, which had developed seven years previously. One tumor occupied the entire left side of the lip; was violaceous in color, soft to the touch, and considerably elevated. The other lesion was on the right side and was a trifle larger than a split pea, and of the same character as its neighbor. The larger lesion had been treated with a vigorous application of the solid carbon dioxide and there was, when the case was presented, very little evidence of the former tumor. The smaller lesion had not yet been treated.

DR. TRIMBLE said that he desired to call attention to the fact that the CO<sub>2</sub> snow had a rather detrimental effect on lesions previously treated with the X-ray. The tissue seemed to crumble in a peculiar way, and a low-grade inflammatory process was produced which sometimes resulted in superficial gangrene. He had noticed this particularly in one case, in which the lesion treated had been burned slightly with the X-ray about a year before. Perhaps this peculiar action only occurred in those cases where a dermatitis had been produced with the X-ray; however, it was quite different from the usual action of the solid carbon dioxide on the tissues.

DR. MACKEE said that he had recently used the solid carbon dioxide in telangiectasia following a radiodermatitis with pleasing results. The speaker said that great care must be exercised when employing the solid carbon dioxide on tissue that had previously been subjected to Roentgen therapy, as such tissue was especially susceptible to refrigeration. He had seen deep ulcerations that required several months to heal, as a result of a single application of five seconds under light pressure, and he would advise in all such cases a preliminary application of one or two seconds under light or moderate pressure. Pusey had called attention to this phenomenon in his last article, and as an explanation said that as a result of X-ray or radium treatment there was an endarteritis with obliteration of many of the cutaneous capillaries. This combined with the endarteritis caused by freezing produced a much greater effect than when refrigeration was applied to skin that had not been treated with the X-ray or radioactive substances.

**Case for Diagnosis.** Presented by DR. MACKEE.

This patient, a young Englishman, twenty-five years of age, was referred to Dr. MacKee by Dr. Faxon E. Gardner. Eight weeks ago the patient had received an insignificant wound on the index finger of the right hand, while performing his duties as a janitor's assistant. This was followed by a painless, low-grade cellulitis with slight suppuration, which, in spite of the fact that the lesion was exceedingly small and shallow and had been treated locally by the usual methods, did not show the slightest tendency to heal. Five or six weeks ago a painless, soft and colorless swelling began to develop at about the centre of the inner aspect of the forearm. When he first came under observation the tumor was three inches long and two inches wide. It did not fluctuate upon palpation, but felt boggy and there was very little cutaneous reaction; the

axillary glands were enlarged but painless. One week ago a free incision was made through the mass but no pus was found. There was very little hæmorrhage, but a rather free serous discharge. The tissue was of that soft, spongy consistency found in fungating and vegetating lesions. Cultures were made upon agar, glucose agar and blood agar, and incubated at room temperature for six days, but no growth was obtained. For the first three days after the incision there was a discharge of serum, after which a small amount of pus made its appearance, as if from a secondary infection. No internal medication had been given and the local treatment had consisted of a wet bichloride dressing. At the time of presentation, the tumor was somewhat smaller, and there was a moderate seropurulent discharge.

DR. OULMAN said that the ulcer did not look like any picture of sporotrichosis which he had ever seen published.

DR. POLLITZER said that the ulcer did not look like one produced by sporotrichosis. It resembled closely the ulcer seen in the groin after a bubo following chancreoid.

DR. GILMOIR said that the lesion had probably started as a deep abscess which had never been fully opened and that its presence was shown by the welling up of pus from a small opening on the floor of the ulcer.

DR. WINFIELD agreed with Dr. Gilmour that there was probably a deep-seated abscess.

DR. D. O. ROBINSON thought that an attempt should be made to cultivate the organisms on Sabouraud's special medium before sporotrichosis was eliminated.

DR. MACKEE said that he did not think that the case was one of sporotrichosis, partly because it had been impossible to cultivate the sporothrix, and partly because the lesion was undergoing spontaneous involution. He could not regard it as an ordinary abscess because the incision was entirely through the lesion, and yet there was no pus at first. Later a small amount of pus appeared but it seemed to be contained in small pockets in the spongy tissue. The appearance was not unlike that found in cases of ringworm of the beard when a spongy mass was incised and small pockets of pus found. Throughout the entire involution of the lesion the discharge had been more of a serous than of a purulent character. The speaker also called attention to the fact that there had been very little inflammation, and no pain; not nearly as much as was usually associated with cellulitis. He was inclined to regard it as a granuloma of pyogenic origin and the failure of the cultures to faulty technique.

#### Parapsoriasis. Presented by DR. MACKEE.

The patient, a young man, had been presented by Dr. Fordyce at the October, 1910, meeting of the New York Dermatological Society. He had a generalized, scaly, macular eruption of seven years' duration. The peculiar feature of the case was the presence of small, confluent macules of cutaneous atrophy, rather generalized in distribution and which could only be seen when the light fell obliquely on the skin. Dr. MacKee also stated that the patient's brother, a boy of ten years, was developing a follicular eruption on the legs and that the patient's disease began in this manner.

DR. OULMANN said that this case resembled very closely one shown by Dr. Williams last Spring—a keratoderma follicularis atrophica.

DR. POLLITZER said that the atrophic patches and scars, which were quite extensive in the parts affected, did not belong to the picture of parapsoriasis and would suffice to exclude that affection. He offered no alternative diagnosis.

DR. WALLHAUSER said that last year he had presented a case almost identical with this, with a diagnosis of parapsoriasis which was accepted. That case also showed scarring, which had increased since.

### **Tuberculosis of the Buccal Mucosa (?). Presented by DR. MACKEE.**

The patient, a man forty-eight years of age, a native of America, and a farmer by occupation, had been referred to Dr. MacKee by Dr. George D. Stewart, for application of the X-ray to a lesion of the buccal mucosa. The patient was a healthy individual who had always led a hygienic life and there were no points of interest either in his past personal history, or in his family history. He had been an inveterate pipe smoker and usually held the pipe in the right side of the mouth. Four years ago he noticed a small ulcer on the inner surface of the right side of the lower lip, which soon involved the right commissure of the mouth. The disease then spread along the mucous surface of the right cheek to the third molar tooth and finally involved the lower gum to such an extent that it was necessary to extract several teeth. Three weeks previous to the presentation of the case, Dr. Stewart had removed considerable tissue in the immediate neighborhood of the right commissure. The wound had healed promptly. When presented, the lower third of the right cheek was red and infiltrated, its inner surface was covered with granular tissue, the lower gum from the third molar to the middle line was spongy and covered with vegetations and minute ulcerations. The lower lip was swollen and hard and its inner surface, also, was covered with vegetations. Specimens of the tissue ablated by Dr. Stewart had been presented to three general pathologists and they all returned a diagnosis of tuberculosis.\*

The consensus of opinion of those present was that this case was one of epithelioma.

DR. MACKEE said that he was not willing, without further microscopical study, to accept a diagnosis of cancer. It seemed to him to be too widespread and to lack a sufficiently definite border for that diagnosis. On the other hand the history and age of the patient would favor such an opinion. He thought that the swelling and hardness of the lip and cheek were due to œdema caused by the contracted scar interfering with the circulation, rather than to an infiltration of the tissues by the disease. The pathological work had been done by general pathologists who simply reported epithelioid tubercles and giant cells. A further study would be made and the findings reported at a future meeting of the Section.

\*This patient died on December 15, 1910, of basal meningitis.



**Vegetating Dermatitis.** Presented by DR. MACKEE.

The patient was a man fifty years of age and a watchman by occupation. He was from Dr. Fordyce's clinic. He first came under observation four years ago, at which time he presented an ulcer on the anterior and inner surfaces of the left foreleg just above the inner malleolus. The lesion was six inches in length by four in width and was deep enough to expose the tibia. A radiograph taken at that time showed the bones to be normal, with the exception of a very slight periostitis which was not of a luetic character. The edges of the ulcer were markedly indurated. The most interesting feature of the case, however, was the presence of a vegetating dermatitis which covered the dorsum of the foot and all surfaces of the leg below the knee. The patient stated that the trouble started as an eczema, ten years previously, and which he thought was secondary to varicose veins. The vegetating dermatitis had been present only a few months. In the four years in which he had been under Dr. MacKee's observation he had been treated with the X-ray, the high frequency current, had had straps of zinc plaster applied, multiple incisions through the margins of the ulcer, anti-syphilitic treatment, mild caustic, and various other applications. On several occasions some improvement had resulted which was not marked and only temporary. During the past four months the patient had been receiving weekly injections of the mixed staphylococci vaccine. The dose at first was 50 million, which had gradually been increased to 300 million. The patient, Dr. MacKee said, was presented mainly to show the marked improvement which had apparently been the direct result of the vaccine treatment. The vegetating dermatitis had practically disappeared, the induration was markedly lessened, and the ulcer was almost filled with granulation tissue which, unfortunately, was not of a very healthy quality.

DR. GRAESER said that he had seen a similar lesion existing for five years on the arm cured by mercury, and he believed that this case, also, was syphilitic.

DR. WINFIELD said that almost all ulcers improved under mixed treatment, and that therefore the therapeutic test must be accepted with great caution.

**Blastomycosis.** Presented by DR. OULMANN.

The patient, a man sixty-five years old, a sailmaker, first came under the speaker's observation in May, 1910. At that time his trouble had existed for about five years. There was, above the metacarpo-phalangeal joint of the right index finger, a tumor of over walnut size, covered with crusts. The margins were highly infiltrated and bled profusely when scraped. There were a number of miliary openings between the crusts from which pus could be pressed out. Between the crusts were a number of large papillary growths. At the middle of the flexor surface there existed a tumor of the same kind of the size of a palm. Under X-ray and trigase (a yeast preparation) the tumors decreased considerably in

size. To hasten the healing curettage was resorted to. Dr. Oulmann was able to obtain cultures of the blastomyces and he found the double-contoured blastomycosis cell in the pus and was able to watch its development by the hanging-drop method as mentioned by Gilchrist. The case was especially interesting on account of the marked atrophy of the skin of the hand and the fingers, which followed the blastomycotic inflammation. Some of the fingers were even flexed and claw-like, due to this scleroderma-like atrophy. Sections of the inflamed skin of the tumor part showed loss of the elastic fibres in the upper part of the cutis.

CHARLES M. WILLIAMS, M.D.,  
*Secretary.*

### NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Stated Meeting, held December 6, 1910.

SIGMUND POLLITZER, M.D., *Chairman.*

Case for Diagnosis. Presented by DR. WILLIAMS.

The patient was a negro girl, two years old last September. In March, 1909, she had a heavy cold and about the same time an ulcer developed at the right angle of the mouth. At first it was hardly more than a crack, but gradually increased to its present size, in spite of various local treatments. There was now an uneven, sharply outlined mass about three quarters of an inch in diameter and raised one eighth of an inch above the level of the skin. The surface was red and uneven, partly dry, in places covered with thick crusts. A yellow streak extended backward on the buccal mucous membrane about a quarter of an inch from the angle of the mouth. The patient gave a positive Wassermann reaction. Nevertheless, the clinical appearance was not that of a syphilitic lesion, which should show more destruction of tissue after so long a duration. It was probably a granuloma pyogenicum, but lupus was not yet positively excluded.

DR. LUSK said that this could hardly be a case of syphilis, because in that case the disease would have made much greater progress in the year and a half it had existed.

DR. WALLHAUSER said that this was probably a fibroma, and neither syphilis nor lupus. He had seen similar lesions produced by injuries and by chronic eczema. He advised removal by the actual cautery.

"Keratitis Rosacea." Presented by DR. WEIDLER.

Mrs. K., forty-eight years of age. She developed a severe rosacea about twelve years ago which was associated with seborrhœa and indurated

acne pustules. Five years later her ophthalmic trouble began and this had persisted intermittently ever since. The remissions and exacerbations appeared to be in relation with the rosacea.

She first came under the speaker's observation in June, 1910, at which time the cutaneous eruption was very severe. The skin of both eyelids was involved and there was a marked conjunctivitis. An active keratitis was present and there were a number of corneal scars. The use of fluorescein had enabled Dr. Weidler to very accurately observe the ulceration, scarring, and staining of the cornea. Both the von Pirquet and Wassermann reactions were negative.

In the treatment of the eye condition the best results were obtained by the internal administration of large doses of sodium salicylate, as high as sixty grains in twenty-four hours.

The speaker stated that there was very little relating to this subject in the literature. Norris and Oliver recognized eruptions on the cornea accompanying acne of the face. Fuchs had called attention to rosacea of the conjunctiva which was first recognized by Arlt, but no mention was made of the cornea being affected. Arlt also mentioned that Horner had recognized the analogy between chalazion and rosacea. In acne, rosacea, and seborrhoea the sebaceous glands play the same rôle as do the Meibomian glands in chalazion formation. Following this line of reasoning one might be led to think that in "keratitis rosacea" we had a process beginning as an acne of the conjunctiva secondary to that of the face, and gradually extending and involving the cornea. In "keratitis rosacea" we had very pronounced swelling of the conjunctival vessels together with new vessel formation. This was accompanied by a hyperplasia of the epithelial and subepithelial tissues. If this premise were true then we were quite correct in calling this form of keratitis by the name of "keratitis rosacea."

The speaker said that he had been able to find the report of fifteen cases of this form of keratitis. It usually affected both eyes. The treatment was rather unsatisfactory, many different drugs being advised. The prognosis was guardedly favorable, depending on the severity and duration of the acne eruption on the face.

DR. WALLHAUSER said that the patient had a well-marked dermatitis seborrhoeica of the face and scalp, but ventured no diagnosis of the condition of the eye.

DR. LUSK said that the patient undoubtedly had a rosacea of the face, but that he would offer no diagnosis of the condition of the eye.

DR. WEIDLER said that he understood the combination of keratitis and rosacea was common in Europe, where it was reported in ophthalmological literature, though very rare here. When he presented the case before the Ophthalmological Section his diagnosis was agreed with by the members.

#### **Pemphigus of the Conjunctiva. Presented by DR. WEIDLER.**

Mr. S. R., seventy years of age, a Russian. The patient was first seen by the speaker at the Manhattan Eye and Ear Hospital about four

months ago and at that time it was learned that he had never had any trouble with his eyes until about six months previously. When first examined the right eye presented the following: The edges of the lids were covered with a thick secretion, yellowish in color and matting the lids together. The latter were thick and shrunken, total symblepharon uniting the lids to the eyeball—to the very edge of the lids. The opening between the lids on being forced open was 8mm. The bulbar conjunctiva that remained visible was thick and thrown in folds over the cornea. A small portion of the cornea was seen and the general appearance of the eye was that often seen in old trachoma with synechia formation. In the left eye it was found that the iris was brown and reacted to light, accommodation and convergence. Vision 20/200. There was the same matting of the edges of the lids. The symblepharon was very slight and deep in the cul-de-sac. At the limbus of the cornea were seen several small white areas which when gently rubbed with an applicator would bleed quite freely. The conjunctiva was red and swollen with the appearance of œdema in places. The corneo-scleral margin showed a number of small bleb-like formations and these were pearly white in color, and the rest of the cornea was clear. The treatment at this time consisted in the use of a boric acid wash and the gentle application of the copper stick. On October 20, 1910, the condition in the right eye was unchanged, except that the symblepharon had contracted more and the opening between the lids was less. In the left eye the cul-de-sac seemed to be more shallow and the movements of the lids less free. It was very difficult to evert the lids and any attempt was always followed by free bleeding. The conjunctiva presented spots of necrosis: these spots bled easily and there was loss of the epithelium with the synechia forming between the conjunctiva of the eye and the lids. This was the beginning of the symblepharon. The conjunctiva had been slowly extending over the cornea. The areas of necrosis, followed by free bleeding, synechia formation, later cicatrization and contraction, and finally the symblepharon which gradually became more and more complete, was a picture that the speaker had seen many times in the progress of the disease. He was able to observe the steady involvement of the left eye by this apparently inevitable destruction. The flow of tears had ceased within the last week and the cornea had begun to show slight ulceration in the upper and outer part. The general health of the patient had been declining during the progress of the disease of the eyes. Two weeks ago the ulceration of the cornea had become quite extensive and when the case was presented the whole of the cornea appeared to be denuded of the epithelial layer. The vision now was "finger" at six inches. The patient was referred to Dr. Jonathan Wright for an examination of the nose and throat and he reported as follows: "In the nose the whole of the cavity was covered by what looked like a dirty-brownish, moist, shining membrane, but it was an exudate evidently closely

incorporated with the subjacent mucosa. It did not bleed and could not be stripped off. There was evidently associated with the process a degree of fibrosis which was manifested, first, by the firmness with which the exudate or surface structure was bound to the subjacent parts, second, by the bloodlessness of the surface, and third, by the fact that at the back of the vestibule, where the internasal chambers proper and their mucous surfaces began, the introitus was narrowed by a fibrous contraction. With the fibrosis there was no appreciable amount of deep infiltration, no true ulceration, no necrosis of the soft tissues or of the bone. There was a somewhat analogous lesion of the conjunctiva. It was not the clinical picture of membranous rhinitis or diphtheria, nor of syphilis, nor of rhinoscleroma. The eye lesions resembled the blebs one might see in acute herpes or pemphigus in the throat." A von Pirquet test was made, but the result was negative, as was also the Nogouchi test. A culture was made from the secretions of the left eye and this revealed the presence of streptococci and pseudo-diphtheria bacilli. There was no eruption elsewhere on the body.

**Annular Syphilide.** Presented by DR. WILLIAMS.

The patient was a negro, and showed a few typical lesions on the face. No history of infection was obtainable.

CHARLES M. WILLIAMS, M.D.,  
*Secretary.*

## NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Stated Meeting, held January 3, 1911.

JEROME KINGSBURY, M.D., *Chairman.*

**Vegetating Dermatitis.** Presented by DR. MACKEE.

The patient, a man thirty-five years of age, had first come under observation at Dr. Fordyce's clinic six months previously. At that time he had what appeared to be a typical intertrigo; a non-marginated, angry-looking dermatitis, where the scrotum was in contact with the inner surfaces of the thighs. There was considerable follicular involvement, not only in the area of dermatitis, but scattered over the thighs and abdomen. Local soothing applications did no more than relieve the itching which was quite severe; stimulating and anti-parasitic ointments were also tried without benefit. The inflammation then gradually assumed a vegetating and sharply margined appearance. Thinking of the possibility of ringworm repeated applications of a ten per cent. solu-



tion of sodium hyposulphite, as suggested by Dr. Fordyce, were employed, the condition, however, being aggravated rather than relieved. An emulsion containing staphylococci, streptococci, and colon bacilli was then employed for a period of eight weeks. Under this treatment the pustular folliculitis disappeared, but the vaccines had no influence whatever upon the main disease. Cultures from the lesion had only demonstrated the staphylococcus albus. The scales had been examined, but it had been impossible to demonstrate the presence of spores. When presented to the Section the patient exhibited a sharply margined area of vegetations involving the upper fifth of the inner surfaces of both thighs, the under surface of the scrotum, and extending back to and surrounding the anus. The lesion projected more than a quarter of an inch above the cutaneous surface, was fissured, slightly scaly, dry, and decidedly pruritic.\*

DR. POLLITZER said that the eruption was very suggestive of ringworm or eczema marginatum and he believed it would disappear under the use of chrysarobin ointment.

DR. WILLIAMS agreed with Dr. Pollitzer that the clinical appearance was that of eczema marginatum, and said that he had seen several cases recently which had been cured by painting with tincture of iodine. In one of these a careful search had failed to demonstrate the fungus.

#### Granuloma Pyogenicum. Presented by DR. WILE.

The patient, a man of forty years, noticed three months previously a papule which appeared at the right side of the nose. Very soon the present tumor began to develop, and grew to the size of an olive without any pain or itching. When presented, the tumor was a red, soft, mammillated, frambæial growth, attached to the underlying skin by a thick pedicle. Upon pressing the tumor minute droplets of pus would appear from the deeper portions; the pus was foul-smelling, and cultivation showed a pure growth of the staphylococcus albus. The inception of this tumor from a point of trauma, its frambæial aspect and rapid growth, unattended by itching, and finally the definite pedunculation, led to the diagnosis of granuloma pyogenicum (Hartzell). Such tumors were reported in the earlier literature as botryomycosis hominis, as they were thought analogous to post-castration botryomycosis of horses. Later they became known as pseudo-botryomycosis, but Hartzell's designation was to be preferred above all others, as it was ætiologically and pathologically descriptive of the lesion.

DR. POLLITZER said that this was a typical case. He thought the disease was much more common than the small number of cases presented and reported would indicate.

#### Mycosis Fungoides. Presented by DR. OULMANN.

The patient was a woman fifty-four years old, who had always enjoyed perfect health. Three or four years ago she noticed a red patch

\*This patient was cured by applications of tincture of iodine.

the size of a fifty-cent piece on her abdomen which itched slightly. Later, other patches developed on the abdomen and also on the back, some of which ulcerated but healed quickly. Afterward, only dry patches appeared which spread over the extremities and neck. For the past two years the itching had become more intense. In August of this year a tumor appeared on her right forearm and was excised. When presented, there were a great number of dry patches scattered over the body, of varying size and color, more or less circumscribed, scaly and itchy. The blood examination did not show any leukæmia. The patient had lost about thirty-five pounds in the last six months.

Dr. POLLITZER said that the early stages of mycosis fungoides resembled so closely érythrodermie pityriasique en plaques disséminées, that it was impossible to distinguish between them from the clinical aspect alone. The itching, which was usually severe in mycosis fungoides, was usually absent from erythroderma, but this symptom was inconstant. The areas involved in mycosis were usually far more irregular in outline than those in parakeratosis. One of the two cases of this parakeratosis first published by Unna, Pollitzer, and Santé proved ultimately to be mycosis fungoides, and this error in diagnosis had frequently been made by some of our best dermatologists. Dr. Pollitzer recalled a remark made by the late Dr. Hyde that a diagnosis of érythrodermie pityriasique en plaques disséminées was one of the most risqué that could be made.

#### Lichen Planus Annularis. Presented by Dr. OULMANN.

The patient was a woman fifty-seven years old. About six months ago a rash developed on her left leg. Some of the spots which itched very much soon became pretty brown, while others enlarged and formed round, slightly raised patches which became darker. In one place the lesions combined to form a large, irregular, scaly patch. Again, a number of the single typical lesions grouped themselves in the form of a ring with a free centre of about lentil size. In other instances a number of rings formed a gyrus. New single lesions appeared from time to time and the different forms could be seen as they developed during the last two months.

#### Erythema Annulare. Presented by Dr. CLARK.

The patient was a male, a Russian, twenty-four years old. Generally well and strong. Each winter for the past three years he had had an attack similar to the present one, which began six days ago with red patches on the forearms and legs. Ten days ago he began to have vesicles in his mouth, and the lesions on the arms and legs became round and elevated. The patient was not ill at the onset of the attacks and was being relieved, as he always had been in previous attacks, by diet, cathartics, and intestinal antisepsis. The lesions presented were typical annular lesions of erythema multiforme, but the interesting feature was the involvement of the mucous membrane of the mouth.

DR. POLLITZER asked what proportion of cases of erythema multiforme showed any involvement of the mucous membranes. In his experience this association was extremely rare.

DR. CLARK said that he did not know in what proportion of cases of erythema multiforme the mucous membranes were involved, but that in the present case, lesions had appeared in the mouth in two out of four previous attacks.

**Trichorrhexis Nodosa Barbæ.** Presented by DR. KINGSBURY.

The specimens shown were from the mustache and beard of a male patient. He was about thirty-five years of age and was apparently in good general health. The hairs were of fairly good length and along the shaft of each could be demonstrated from two to five characteristic bead-like swellings. The scalp hair was thick and fairly long, but here there were no nodes nor split ends.

CHARLES M. WILLIAMS, M.D.;

*Secretary.*

#### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building, on November 14, 1910. DR. CHARLES N. DAVIS, *President*.

**Case for Diagnosis.** Presented by DR. DAVIS.

The patient, a male of thirty-six years, had several annular lesions of four years' duration upon the face. There was a quarter-dollar-sized area on the right side of the forehead, a silver-dollar-sized lesion on the left cheek extending on to the ear, and a plaque, dime in size, on the right upper eyelid. The hairs of the eyebrow were not destroyed in the latter area. The lesions were sharply marginate, with white centres, not atrophic, and the borders were red and raised. There was a pea-sized plaque contiguous to the patch on the forehead. The patient had been treated with potassium iodide internally and innunctions of the official ointment of mercury. The result had been negative.

DR. STELWAGON said he thought the eruption was lupus erythematosus, but there was a marked resemblance to syphilis.

DR. HARTZELL suggested that a Wassermann test be made and that hypodermic treatment with mercury should be instituted.

**Chancre of the Lip Treated with "606."** Presented by DR. DAVIS.

This patient, a girl of twenty years, appeared at the Dermatological Department of the Pennsylvania Hospital Dispensary, on October 10th, with an initial lesion upon the centre of the lower lip of five weeks' duration. A typical macular rash appeared a few days after her first visit,

with mild concomitant symptoms of syphilis. Dr. Longcope injected 0.4 gm. of "606" below the scapula on October 28th, which was attended with but a slight amount of pain and no sequelæ. Lesser's technique was used in the preparation of the solution. Healing started a few days after the injection, but was not complete until four weeks had elapsed, the lesion having been densely indurated. The macular eruption almost disappeared a few days after the injection, but reappeared and again slowly disappeared. Most of the glandular enlargement was rapidly reduced after the injection, but the largest glands, those nearest the lesion, did not subside for some weeks.

DR. KNOWLES presented a photograph of the patient, showing the character of the initial lesion before the administration of "606."

DR. SCHAMBERG exhibited photographs of cases treated with this preparation.

DR. HARTZELL said he thought the result in Dr. Davis's case could have been achieved almost as rapidly with injections of mercury.

**Case for Diagnosis (Previously Presented).** Presented by DR. STELWAGON.

The patient shown by Dr. Reilly at the last meeting of the Society was exhibited by Dr. Stelwagon to show the marked improvement during the last few weeks. The tumor on the forearm, which resembled so markedly an epithelioma, had melted down almost even with the surface of the surrounding skin, under the internal administration of potassium iodide.

**Dermatitis Factitia.** Presented by DR. STELWAGON.

The patient, a woman of forty-two years, gave the history of having had the present type of eruption for two and one-half years. The patient was exceedingly neurotic. There was, at first, intense itching of the skin and the woman tried to dig out the supposed cause of the pruritus with her finger nails. There were pinhead to pea-sized, but mostly linear patches on the shoulders, the back and the buttocks. There were numerous reddish-brown crusts, hæmorrhagic excoriations and scars. Some of the linear areas were several inches in length; so long, in fact, that the application of an acid was considered the probable cause of the outbreak.

DR. SCHAMBERG exhibited pictures showing similar lesions.

**Lichen Planus.** Presented by DR. STELWAGON.

The patient, a male of twenty-three years, had had the present eruption for six months. The outbreak was very extensive; the hands, the wrists, the left palm, the chest, the abdomen, and the mucous membrane of the mouth were markedly affected. The dorsal surfaces of the hands were most prominently involved. The lesions were from pinhead to pea in size. Pruritus was not a noticeable feature.

**Psoriasiform Syphilis in a Negro.** Presented by DR. SCHAMBERG.

A negro of twenty-nine years had an eruption of some months' duration. Several types of lesions were present: annular in the neighborhood of the mouth, soft papular on the penis, and whitish plaques, resembling psoriasis, on the trunk, the buttocks, and the legs. These latter plaques were from pea to dime in size. There was an inflammatory glandular enlargement of the right inguinal region.

DR. HARTZELL said the resemblance of some of the lesions to those found in psoriasis was so marked, that he was somewhat inclined to consider the possibility of two diseases being present.

**Scrofuloderma.** Presented by DR. KNOWLES.

A little girl, twelve years of age, was exhibited with marked enlargement of the submaxillary and the sublingual glands, of some months' duration. There were two dime-sized, red, infiltrated patches over the enlarged glands, resembling lupus vulgaris. Although the teeth of the lower jaw were somewhat decayed there was no sign of a sinus.

**Linear Morphœa in a Girl of Thirteen Years.** Presented by DR. HARTZELL.

The case presented exhibited a continuous lesion, about one-half inch in width, and extending from the bend of the left elbow, up the arm and diagonally to the left breast. The patch was without pigment, practically without infiltration, and in certain areas was apparently slightly atrophic. Small telangiectases could be detected with a magnifying glass, running into the depigmented areas. The skin felt perfectly normal, excepting in the neighborhood of the shoulder, where there was slight infiltration and a little board-like resistance. There were no subjective symptoms. The child was of an extremely nervous temperament. The lesion followed accurately the nerve distribution.

DR. HARTZELL presented a photograph of a stout woman, with three morpheeic, palm-sized patches on the right shoulder and the outer side of the right upper arm.

DR. STELWAGON referred to a linear morphœa, the photograph of which was published in his book.

**Malignant Syphilis of Probably Hereditary Origin.** Presented by DR. KNOWLES.

The patient, a woman of twenty-five years, born of an Indian mother and a Caucasian father, gave the history of having had some affection of the eyes at birth, which was followed in a few weeks by a generalized rash, disappearing under treatment. Since then, numerous large lesions had appeared on various parts of the body. The eyes and teeth were appar-



ently normal. The present lesions began in May of 1908. There were now six large tertiary gummata on the lower legs. The one in the left popliteal space was palm in size and extended to the bone, although the latter was not involved. The other lesions were all deep seated, with punched-out edges, from silver-dollar to palm in size. There were numerous pigmented and white scars on the legs and the arms, some double-palm and larger in size. It was a most malignant case of syphilis. The patient stated that a younger sister was covered with lesions shortly after birth and lived but a few weeks.

**Fibroma (?)**. Presented by DR. KNOWLES.

The patient, a woman of thirty-five, noticed the appearance, five years ago, of small tumors on the face. When presented to the Society, there were about fifty, pinhead to pea-sized, elevated, smooth, moderately hard growths, mostly of the color of the sound skin; some few, however, had a pinkish appearance. The lesions were located on the neck, the chin, and the cheeks.

DR. HARTZELL thought the condition was probably fibromatous.

DR. DAVIS mentioned the resemblance to adenoma sebaceum.

DR. SCHAMBERG presented a photograph, which showed dermatitis gangrenosa complicating typhoid fever.

FRANK CROZER KNOWLES, M.D.,

*Reporter.*

#### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building, on December 12, 1910. DR. CHARLES N. DAVIS, *President*.

**Epithelioma of the Lip (Four Cases)**. Presented by DR. PFÄHLER.

Dr. Pfahler exhibited four cases of epithelioma of the lip, involving chiefly the cutaneous half of the mucous membrane, showing the type of the disease that would recover under Roentgen ray treatment.

CASE 1. Male; aged fifty-seven years; an excessive smoker. Treatment was started April 22, 1907, at which time there was an epithelioma on the right side of the lower lip, which had existed for three years. The growth was one-half inch in diameter and was associated with extensive areas of leucoplakia within the mouth. His lesions disappeared after twenty-four treatments, administered over a period of six months. He had had occasional treatments since then because of a little roughness of the mucous membranes, but had been practically well for three years, in spite of the fact that he had continued his smoking.

CASE 2. A male, fifty-four years of age, was sent for treatment by

Dr. Dwight, on October 19, 1910. Three years ago a hot cinder struck his lip and burned it. This burn never healed completely. At the beginning of treatment he had an indurated epithelioma, one-half inch in diameter, on the right side of the lower lip, continuous with a crust covering two-thirds of the same, but involving chiefly the cutaneous half of the mucous membrane. He had had fifteen treatments during the last seven weeks, and the lesion had almost healed. The first four treatments were given directly on the lip, and those succeeding were applied to the surrounding tissues, a leather filter being used. The object being to destroy the epithelioma as quickly as possible without destroying the lip and also to control the chance of subsequent metastases.

CASE 3. The patient, a male of fifty-four years, had been smoking twenty to thirty cigars daily, for many years. The left side of the lower lip had been sore for some years. Two-thirds of the lower lip was now denuded of mucous membrane, and a growth one-half inch in diameter was present on each side of the median line of the lower lip. Six treatments had been given since November 21st, with a marked improvement in the condition.

CASE 4. The fourth case was a male, who was an excessive smoker. He had had a small epithelioma, or persistent crust, about one-fourth of an inch in diameter, with no induration, occupying the cutaneous half of the mucous membrane. The growth proved to be non-malignant and was easily healed in a few treatments with the Roentgen rays. Two months ago an epitheliomatous growth developed upon a portion of this scar, two and one-half inches in diameter. A radical operation was then advised.

Dr. DAVIS suggested the use of trichloroacetic acid in certain cases of leucoplakia.

Dr. HARTZELL said that mild treatment with the Roentgen rays had been most efficacious; exposures lasting for three minutes and being administered every five days.

Dr. PFAHLER thought fulguration was of help in selected cases.

### Keratosis Senilis and Epithelioma. Presented by Dr. KNOWLES.

The patient, an Italian woman of sixty years, presented numerous keratotic areas, of some years' duration, upon the face and the dorsal surfaces of the hands. There were so many lesions of this character that the face gave somewhat the appearance of xeroderma pigmentosum. There was a hazelnut-sized epitheliomatous growth on the right ala of the nose and another tumor of the same character, but smaller in size, on the left ala.

### Gummatous Infiltration Treated with "606."

Presented by Dr.

SCHAMBERG.

Two years ago, the present patient, a woman of twenty-four years, came under observation with secondary syphilis. During the eighteen

months the patient had followed her treatment very irregularly. Two months ago there developed an ulceration of the lower lip, which had continued to spread notwithstanding several injections of gray oil. Six days ago 0.5 gm. of "603" were injected, comparatively little pain ensuing. Forty-eight hours later there was visible improvement in the lesion and now there was a distinct change in the growth.

DR. HARTZELL referred to the unfavorable view of salvarsan that Goucher and also Buschke had recently taken.

DR. SCHAMBERG referred to several relapses he had had, following a few weeks after the injection of "606."

**Lupus Erythematosus Treated with Carbon Dioxide Snow.** Presented by  
DR. SCHAMBERG.

The patient, a woman of twenty-one years, gave the history of having had the present condition for eighteen months. Typical butterfly patches were present on the nose and the cheeks. Lesions were also noted on the forehead and the scalp and on the lobe of the left ear. Improvement was exhibited after one application of the carbon dioxide snow.

**Pityriasis Rubra Pilaris.** Presented by DR. SCHAMBERG.

The case presented was a male of fifty-eight years. The patient's physician alleged that he had psoriasis in the beginning of July, 1910, for which a chrysarobin ointment was used, and internally liquor sodii arsenitis; averaging ten minims three times a day. The latter preparation was continued for five months. A severe dermatitis was produced, probably by the ointment. When presented, the patient had an almost universal eruption characterized by general redness, scaling and follicular keratosis. The palms and the soles showed a diffuse hyperkeratosis of a pronounced character. The proximal phalanges exhibited distinct follicular plugs. On the trunk were scores of small and large senile keratoses, most of which had developed rapidly within recent weeks. The patient complained of a great amount of itching. On the legs were reddish, scaly patches, somewhat suggestive of an altered psoriasis. The question of interest in this case was whether the patient originally had psoriasis and whether the condition present now might have been wholly or in part superinduced by the vigorous internal and external treatment used.

DR. KNOWLES exhibited several photographs of a case of pityriasis rubra pilaris simulating psoriasis.

**Secondary Syphilis Treated with "606."** Presented by DR. DAVIS and  
DR. WALKER.

The patient, a male of twenty-four years, unmarried, acquired a chancre of the penis in July, 1910. A generalized eruption developed

the latter part of August. Nocturnal headache, pains in the joints, and marked glandular enlargement were noted. There was also a pharyngitis and some loss of hair. The lesions were of an unusually large type; erythemato-squamous and papulo-squamous. The patches were mostly one-half dollar and larger in size, of a dark, brownish-red color, with a considerable amount of infiltration. An injection of salvarsan, 0.6 gm. was given on December 7th. The dose was divided, 0.3 gm. being injected into each buttock. Although there was a considerable amount of pain no complications ensued. The Lesser technique was employed. As the injection was given but five days ago, excepting for a slight fading of the eruption, there was no change.

**Lupus Vulgaris (Two Cases).** Presented by DR. HARTZELL.

The first case was a little girl of seven years, with a finger-nail-sized patch on the right cheek. The patch consisted of seven typical tubercles, pinhead in size, with a slightly scaly surface. Carbon dioxide snow had been applied by another physician, without benefit. The disease started five years ago and the growth had been very slow. The child was born in Russia.

The second case was a male of forty-three, born in Russia, who gave a history of having had the start of the present eruption twenty-nine years ago. The entire right cheek, the right side of the neck, extending to the clavicle, the right side of the forehead and a considerable portion of the right side of the scalp were involved by the one patch. The involved area contained numerous typical lupus nodules, with a considerable amount of crusting and scarring. The circumference of the lesion was sharply margined, with numerous pea, and smaller sized, yellowish-red nodules. The speaker said that he presented the cases to show the difference between the extent of the disease in the two cases.

**Lichen Planus.** Presented by DR. DAVIS.

The patient presented was a girl, fifteen years of age, of a very nervous temperament. Two months ago the present attack started with the appearance of numerous rose-red, flat, irregularly shaped papules, which attacked, extensively, the arms, the neck, the back, the legs, and were sparsely distributed over the trunk. The face and the mucous membranes were not attacked. There was a marked tendency to a linear formation of the papules. The pruritus was intense.

**Mycosis Fungoides (?).** Presented by DR. HARTZELL.

The patient, a male of thirty, gave the history of having had the start of the present outbreak, six years ago. There were numerous erythemato-squamous, diffuse, and circumscribed patches on the neck, the

trunk, the upper arms, the upper portions of the thighs, and on the legs. Infiltrations, one-half palm to dime in size, were noted on the sides of the neck and in the right popliteal space. The patches over the anterior surface of the trunk, below the ensiform cartilage, showed unusual prominence of the follicles. The patient complained of extreme pruritus.

**Lichen Planus with Mucous Membrane Involvement.** Presented by  
DR. SCHAMBERG.

A male of twenty-one years was presented with an extremely pruritic eruption of six months' duration. The eruption, with the exception of the face, was almost generalized in distribution. The trunk and the extremities were quite extensively involved. There was a tendency for the lesions on the dorsal surfaces of the arms and the legs to become hypertrophic. The mucous membrane of the lips, the cheeks, and the hard palate showed numerous typical lesions.

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

## BOOK REVIEW

**Treatise on Diseases of the Skin: For the Use of Advanced Students and Practitioners.** By HENRY W. STELWAGON, M.D., PH.D. Professor of Dermatology, Jefferson Medical College, Philadelphia, etc. Sixth Edition, thoroughly revised, with 289 illustrations and 34 full-page colored and half-tone plates. *W. B. Saunders Co.*, Philadelphia, 1910. Price \$6.00.

The rapidity with which the different editions of this work on dermatology have succeeded each other, testifies to its excellence. The sixth comes to us with much of the old matter revised and condensed, and all that is new in dermatology in the last year has been added. In fact some of the articles have been entirely rewritten, as for instance, pellagra; new ones on sporotrichosis, brown-tail moth dermatitis, grain-mite dermatitis, granuloma annulare, etc., have been added.

The skin diseases prevalent in the tropics and that are being seen more and more in our northern seaports, have been given considerable space.

The portion of this treatise that deals with therapeutics has always been especially valuable to students; the sixth edition has been made more especially so, by the thorough discussion of various newer drugs and procedures in the care of skin diseases, as for instance, the application of carbon dioxide snow in the treatment of epitheliomata, naevi, etc.

The illustrations are quite the same as in the last two editions, although a number of the inappropriate older ones have been eliminated, and about twenty-five new ones illustrating the new text have been added.

It seems probable that, with the rapid advances being made in dermatology and the untiring energy of the Author, we will be able to gladly greet many more new editions, for this treatise of Dr. Stelwagon's is one of the best works on dermatology written in the English language, and each succeeding edition is an improvement on preceding one.



## BOOKS AND REPRINTS RECEIVED

*Books marked with an asterisk will be reviewed.*

- \*A Monograph on Albinism in Man. Draper's Company Research Memoirs, Biometric Series VI. By KARL PEARSON, F.R.S., E. NETTLESHIP, F.R.C.S., and G. H. USHER, M.B., B.C. Camb. Two Volumes. *Dulau and Co.*, London, 1911.
- \*Treatment of Syphilis by Salvarsan. By DR. JOHANNES BRESLER. Second Edition. Translated by DR. M. D. EDER. *Rebman Co.*, New York and London, 1911.
- Makers of Man: A Study of Human Initiative. By CHARLES J. WHITBY, M.D. (Cantab). *Rebman Co.*, New York and London, 1910.
- \*The Treatment of Syphilis with Salvarsan. By DR. WILHELM WECHSELMANN. Introduction by DR. PAUL EHRLICH. Translation by DR. ABRAHAM L. WOLBARST. *Rebman Co.*, New York and London, 1911.
- \*Die Wassermannsche Reaktion mit besonderer Berücksichtigung ihrer klinischen Verwertbarkeit. VON DR. HARALD BOAS. *S. Karger, Berlin*, 1911.
- Sonderabdruck aus dem Handbuch der Kinderheilkunde. VON DR. M. PFAUNDLER and PROF. A. SCHLOSSMANN. *F. C. W. Vogel*, Leipzig, 1910.
- Emanuel Swedenborg's Investigations in Natural Science and the Basis for his Statements Concerning the Functions of the Brain. By MARTIN RAMSTRÖM. *University of Uppsala*, 1910.
- Keratitis ex Acne Rosacea. W. B. WEIDLER, *Medical Record*, Feb. 4, 1911.
- Preliminary Report of Cases Treated by the Ehrlich-Hata "606" Injection. CHARLES H. CHETWOOD, *Medical Record*, Feb. 25, 1911.
- Treatment of Acne Vulgaris with Acne-Bacillus Suspensions. MARTIN F. ENGMAN, *Interstate Med. Jour.*, xvii, No. 2.
- Seborrhœic Dermatitis and Alopecia Prematura. T. G. LUSK, *Post Graduate*, Feb. 1911.
- Salvarsan (Ehrlich-Hata "606") in Syphilis. S. POLLITZER, *Med. Jour.*, New York, Feb. 4, 1911.
- Oily Suspensions of Salvarsan: The Technique of the Method. S. POLLITZER, *Med. Jour.*, New York, March 4, 1911.
- Syphilis and the Nervous System, with Remarks on the Wassermann Test and Salvarsan. W. M. LESZYNSKY, *Medical Record*, Feb. 18, 1911.
- Om Thymusinvolutionen Efter Röntgenbestralning. HANS RUDBERG. *Almqvist & Wiksells, Boktryckeri-A.-B.*, Uppsala, 1909.
- An Epitomised Index of Dermatological Literature. An Epitome of volumes 1 to 21, inclusive of the British Journal of Dermatology. A. WINKELRIED WILLIAMS. *H. K. Lewis*, London, 1910.

Transactions of the Fourth International Sanitary Conference of the American Republics Held at San José, Costa Rica, December, 1909. John Barrett, Director-General, Washington, D. C.

\*Salvarsan: Its Chemistry, Pharmacy, and Therapeutics. W. H. MARTINDALE and W. W. WESTCOTT. *Paul B. Hoeber*, New York, 1911.

Ueber die dermato-therapeutischen Anzeigen der Kohensäureschnee-Behandlung. G. NOBL und H. SPRINZELS. *Ztschr. f. diätet. u. physik. Therap.*, xiv, 1910.

The Modern Treatment of Syphilis, with Reference to the Recent Synthetic Preparations. JOHN A. FORDYCE. *Jour. Am. Med. Assn.*, 1911, lvi, p. 186.

Die Uebertragung von Rattensarkom und Mäusecarcinom auf neugeborene Tiere. A. BUSCHKE. *Berl. klin. Wchnschr.*, 1911, No. 5.

Weitere Beobachtungen über die physiologischen Wirkungen des Thallium. A. BUSCHKE. *Deutsch. med. Wchnschr.*, 1911, No. 4.

Klinische und experimentelle Beobachtungen über Syphilis maligna nebst einigen Bemerkungen über "606." A. BUSCHKE. *Berl. klin. Wchnschr.*, 1911, No. 1.

Ueber den Einfluss des Lichts auf das Leucoderma syphiliticum und über Cutis marmorata pigmentosa. A. BUSCHKE und EICHHORN. *Dermat. Ztschr.*, 1911, xviii, No. 2.

L'arseno-résistance au cours du traitement de la syphilis par l'hectine et "606." RAVAUT et WEISSENBACH. *Bull. et mém. Soc. méd. d. hôp. de Paris*, December, 1910.

Technique des injections intramusculaires et intraveineuses de "606." PAUL RAVAUT. *Presse Médicale*, December, 1910.

Report of the Committee on High-Frequency Currents. F. M. LAW. *Jour. Adv. Therap.*, November, 1910.

Herpes Facialis in Scarlet Fever. J. D. ROLLESTON. *Brit. Jour. Dermat.*, October, 1910.

Gangræne of Leg Following Diphtheria. J. D. ROLLESTON. *Brit. Jour. Child. Dis.*, January, 1910.

Public Health Bulletin No. 41: Histories of Lepers from Standpoint of Transmissions: Study of Rat Leprosy. H. T. HOLLMANN and D. H. CURRIE.

A Simple Modification of Wassermann's Reaction. C. BIRT. *Jour. Roy. Arm. Med. Corp.*, October, 1910.

Some Circinate Syphilides. J. KINGSBURY. *Med. Jour.*, New York, Oct. 29, 1910.

Some Random Remarks on Syphilis. J. KINGSBURY. *Am. Jour. Dermat.*, 1910, xiv, No. 9.

Jeber Erfahrungen mit "606" bei subkutaner und intramuskulärer Anwendung. R. LEDERMANN. *Med. Klin.*, 1910, No. 50.

Ueber krankhafte Veränderungen der Nieren bei Quecksilberkuren und Syphilis. R. LEDERMANN. *Ztschr. f. Bal. Klimat. u. Kur.-Hyg.*, 1910-1911, 111 Jahr. Num. 13.

Further Observations on the Use of the Ehrlich-Hata Preparation "606" in the Treatment of Syphilis. J. A. FORDYCE. *Med. Jour.*, New York, Nov. 12, 1910.

Alopecia in a Young Child with Acquired Syphilis. E. W. DITTRICH. *Post-Graduate*, May, 1910.

## NOTICES

The Seventh International Congress of Dermatology will be held in Rome from the 18th to the 23rd of September, instead of from the 25th to the 29th. This will enable the members to attend the Congress on Tuberculosis which will be held from the 24th to the 30th.

## OMISSION

In the May, 1911, issue of THE JOURNAL, under the heading "List of Publications of the Members of the American Dermatological Association for 1910," the following item was accidentally omitted:

SHERWELL, SAMUEL. Further Observations on the Technique of an Efficient Procedure for the Removal and Cure of Superficial Malignant Growths. *Jour. Cutan. Dis.*, Oct., 1910.

## ERRATUM

In Dr. Sutton's article entitled "A Comparative Study of Dermatitis Repens and Acrodermatitis Perstans," which appeared in the June issue of THE JOURNAL, the word corium on page 327, tenth line from the bottom and on page 332, tenth line from the top, should be corneum.

PAPERS READ AT THE THIRTY-FIFTH ANNUAL MEETING OF THE  
AMERICAN DERMATOLOGICAL ASSOCIATION, BOSTON, MASS.,  
MAY 25-27, 1911.

1. Presidential Address. DOUGLASS W. MONTGOMERY, M.D.
2. Sarcoid Tumors of the Skin, with Report of a Case of the Boeck Type.  
GEORGE HENRY FOX, M.D., and UDO J. WILE, M.D.
3. The Relationship of Vaccine Therapy to the Treatment of Certain Diseases  
of the Skin. DAVID KING SMITH, M.D.
4. Dermatitis Vegetans in Childhood. GROVER W. WENDE, M.D., and HERMAN  
K. DE GROAT.
5. A Summary of the Examination of 600 Cases of Syphilis by the Wassermann  
and Weil Reactions. JAMES C. JOHNSTON, M.D., and HANS J. SCHWARTZ,  
M.D.
6. The Results of the Wassermann Reaction in 50 Cases of Syphilis Treated with  
Salvarsan. MARTIN F. ENGMAN, M.D., and R. BUEHMAN, M.D.
7. Treatment of Malignant Syphilis. HOWARD MORROW, M.D.
8. The Mottled Chin in Syphilis, and Other Dermatological Observations. WIL-  
LIAM B. TRIMBLE, M.D.
9. Erythema Nodosum Syphiliticum (Mauriac). FRED. J. LEVISEUR, M.D.
10. A Fatal Case of Blastomycosis. FRANCIS J. SHEPHERD, M.D.
11. Considerations on Lupus Erythematosus. A. RAVOGLI, M.D.
12. Three Unusual Forms of Cutaneous Tuberculosis. HOWARD FOX, M.D.
13. Xanthoma Tuberosum Multiplex. S. POLLITZER, M.D., and UDO J. WILE, M.D.
14. A Micrococcus with Unusual Characteristics as a Factor in a Resistant  
Dermatosis Resembling Acne Vulgaris. HENRY R. VARNEY, M.D., and  
L. T. CLARK, M.D.
- 15-16. Toxic Dermatoses. General Discussion Opened by Papers by J. A. FOR-  
DYCE, M.D., and M. B. HARTZELL, M.D.
17. Some Toxic Effects in the Skin, of Disturbances of Digestion and Metabolism.  
JAMES C. JOHNSTON, M.D.
18. The Toxic Origin of Erythema Multiforme. HENRY G. ANTHONY, M.D.
19. Report on Eosinophilia in Scabies, with Discussion of Blood Counts in Various  
Skin Diseases. JAY F. SCHAMBERG, M.D., and A. STRICKLER, M.D.
20. Multiple Areas of Pigmentation, Involving Chiefly the Trunk of a Girl of  
Twelve Years. FRANK C. KNOWLES, M.D.
21. A case of Veronal Poisoning. S. POLLITZER, M.D.
22. A Case of Acanthosis Nigricans. CHARLES J. WHITE, M.D.

# THE JOURNAL OF CUTANEOUS DISEASES

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## THE ÆTIOLOGY OF LUPUS ERYTHEMATOSUS WITH ESPECIAL REFERENCE TO TUBERCULOSIS, AND A REPORT OF THIRTEEN CASES TESTED BY THE MORO REACTION.

By D. FRIEDLANDER, M.D., San Francisco.

Lecturer on Dermatology—Cooper Medical College—Dermatologist to the Mt. Zion Hospital; Dermatologist to the Pacific Orphan Asylum and Home for the Aged.

SINCE Cazenave, in 1851, recognized this disease as a distinct pathological entity, the question of its ætiology has been a debatable point, more so, probably, than any single dermatological affection, and many hypotheses, varying from the seborrhœa congestiva theory of Hebra to the special germ of Ravogli<sup>1</sup> and Risson,<sup>2</sup> have been advanced as its causal agent. But to-day, there really remain only three theories, which are: (1) The lesion is due to tubercle bacilli in situ. (2) It is due to a toxin developed by a tuberculous focus elsewhere in the body. (3) It is due to a toxin, not of tuberculous origin. And in addition to the above might be mentioned: (4) Various theories.

As subsidiary ætiological factors the following points call for consideration: (1) Circulatory disturbances. (2) Sex. (3) Age. (4) Influence of local irritation.

Practically the entire French school favors a connection with tuberculosis, while the English, German, and Austrian schools are opposed to this idea.

**TUBERCULOUS THEORY.** This theory has practically been supplanted by the other two for the following reasons: (1) No tubercle bacilli have been demonstrated in the lesions. (2) Inoculations of sections of tissue into animals susceptible to tuberculosis, have been uniformly unsuccessful. (3) The histological picture does not even suggest tuberculosis, neither giant cells, nodules, nor round cells, being present.



One of the points on which this theory was based, was the clinical resemblance to lupus vulgaris and the supposed transition into the same, but we know that lupus erythematosus is a notorious imitator of various skin affections (Ward<sup>3</sup>, Crocker<sup>4</sup>), and we may well consider the possibility of faulty diagnosis.

Furthermore, probably the cases in which the supposed transition took place, were cases of Leloir's lupus vulgaire érythématoïde, which is really a transition from a diffuse, flat infiltrated lupus vulgaris to the raised nodular form, and furthermore, lupus erythematosus rarely occurs as early as lupus vulgaris, usually appearing in the third decade of life. In this connection, it is interesting to note that Arndt,<sup>5</sup> in 175 sections of lupus erythematosus, found no evidence of tubercle bacilli or giant cells, but after macerating a piece of the affected tissue, placing it in a 20 per cent. solution of antiformin, and centrifuging the same, found bacilli, which were morphologically, as well as tinctorially, identical with tubercle bacilli.

However, clinically, as well as microscopically, facts are against tuberculosis. It never ulcerates as lupus vulgaris does, and spreads by continuity, not by development of nodules in the corium, and altogether the results of bacteriological and experimental research, speak against tuberculosis.

**TOXI-TUBERCULIDE THEORY.**—This theory, of which Boeck is the chief exponent, and is followed by Besnier, Hallopeau, Darier, Laredde, Herxheimer, Roth, and others, is based on the belief that, while the disease is not due to the tubercle bacilli in situ, it is the result of a tuberculous toxin\* generated at some point in the body, circulating in the blood, and attacking the skin at points where the resistance is lessened. This puts the disease in a class with the other so-called toxi-tuberculides, as lichen scrofulosorum, erythema induratum, folliculitis, etc.

Boeck<sup>5</sup> claims it is not a local process but a toxodermia produced through the action of tuberculous toxins on certain nerve centres. This theory is based on the following: (1) Lupus erythematosus occurs practically in tuberculous individuals or those of tuberculous antecedents. (2) The clinical picture is similar to lupus vulgaris. (3) It can be transformed into lupus vulgaris. (4) Lupus erythematosus can react to tuberculin. (5) Its association with other tuberculous or toxi-tuberculide skin lesions.

\*Zeiler<sup>6</sup> says—"The tendency to-day, is to attribute all forms of toxi-tuberculides to slightly virulent or dead tubercle bacilli, which are carried to their destination by the hæmotogenous route".

Bearing out the theory of tuberculous toxins, is the case of Delbanco<sup>7</sup>, who reports a patient with tuberculous glands and lupus erythematosus, in whom the glands were removed and the eruption disappeared, but reoccurred with the reappearance of the glands. Both glands and diseased skin were inoculated into guinea pigs, with positive results in the case of the glands, but negative with the skin. Prospelow,<sup>8</sup> also, reports the disappearance of lupus erythematosus following the removal of tuberculous glands. On the other hand, arrayed against this theory, are the following facts:

The frequency of tuberculosis and the comparative infrequency of lupus erythematosus. Naegli<sup>9</sup>, in 500 post-mortems, found evidence of tuberculosis in 90 per cent. of adults and 20½ per cent. of children and Schlenker<sup>10</sup>, in 100 autopsies, found evidences of tuberculosis in 66 per cent. Riehl<sup>15</sup>, in 10 post-mortems, on cases of lupus erythematosus, was unable to find any evidence of tuberculosis and Jadassohn<sup>26</sup>, in 22 post-mortems on lupus erythematosus patients, found tuberculosis in but 14 per cent.

From the above it must be evident, that, in a large percentage of subjects, tuberculosis has been present at some time or other and the fact that lupus erythematosus occurs, need not necessarily connect it with a passive or active tuberculous focus and there is no possibility of lupus erythematosus being exclusively due to the presence of tuberculosis, where thoroughly performed autopsies fail to show any evidence of the disease.

The following table consists of reports of cases of lupus erythematosus and the relationship to tuberculosis.

LUPUS ERYTHEMATOSUS AND TUBERCULOSIS.

Author.	No. Cases.	%Tuber- culous.	%Family History.	
Veiel. <sup>11</sup>	119	5	7	
MacLeod. <sup>12</sup>	94	11.6	2.6	Cases brought before London Dermatological Society.
MacLeod. <sup>12</sup>	10	10	..	Personal.
Sequeira and	..	18	40	Discoid form.
Balean. <sup>13</sup>	71	70	80	Disseminated form.
Boeck. <sup>5</sup>	..	66 2/3	16	
Kopp. <sup>14</sup>	38	47	..	
Riehl. <sup>15</sup>	10	..	..	Post-mortem cases.
Gunsett. <sup>16</sup>	20	45	..	
Ullmann. <sup>17</sup>	..	80	..	
Naegli. <sup>18</sup>	..	100	..	
Riehl. <sup>19</sup>	21	9.5	..	
Von Poor. <sup>20</sup>	12	25	..	

Author.	No. Cases.	%Tuber- culous.	%Family History.
Pick. <sup>21</sup>	43	42	16
Róna. <sup>22</sup>	25	33.3	4
Smith. <sup>23</sup>	58	28	..
Pautrier. <sup>24</sup>	35	79	..
Jadassohn. <sup>25</sup>	22	14	.. Post-mortem cases.
Roth. <sup>27</sup>	250	64	75 Collected cases.
Brocq. <sup>25</sup>	..	75	..
Friedlander.	13	6	12

In consideration of the above table it is apparent that the percentage of tuberculosis, active, or latent, is no greater than would occur among individuals not afflicted with this disease and the wide variance of the individual reports certainly make one doubtful of their correctness. Furthermore, the results with the various tests for tuberculosis as given below are not favorable to the toxi-tubercule theory and while we know that tuberculides, especially lichen scrofulosorum, have repeatedly appeared after tuberculin inoculations, we have no record of a case of lupus erythematosus occurring under these conditions and tuberculides usually show a tuberculous histopathological structure—even the von Pirquet test follows this out and we have absolutely no appearance of tuberculosis in sections of lupus erythematosus.

**OPSONIC INDEX.**—Bunch<sup>28</sup> examined ten cases, in Crocker's clinic, with a view to determining the opsonic index toward tubercle bacilli. He reports three cases that were low, two below the margin of health and one just above it.

**CALMETTE REACTION.**—Little<sup>29</sup> reports negative results with the Calmette reaction.

**MORO REACTION.\***—The author tested twelve adult cases of the discoid type and one of diffuse type with the Moro reaction, in which four positive reactions (*i. e.*, on the inoculation site), occurred, all in the discoid type. Thorough physical examination failed to show any tuberculous symptoms in but one of the thirteen patients; two gave a history of family tuberculosis, but both these cases were negative to the reaction.

\*Relative to the value of the Moro reaction in regard to the presence of tuberculosis, it should be stated that serious reflections have been cast on the authenticity of the test.

"The Moro test discredited as a practical test for Tuberculosis." F. R. CHARLTON, *Jour. Am. Med. Assn.*, liv, No. 12.

TUBERCULIN REACTION.\*

Author.	No. Cases,	Local Reaction.		General Reaction.
		Positive.	Negative.	
Arning. <sup>30</sup>	2	0	2	2
Pick. <sup>21</sup>	29	Suggestion in one case.	28	14
Kyrle. <sup>31</sup>	1	0	1	This case had, in addition to lupus erythematosus, erythema induratum and lichen scrofulosorum, both of which reacted locally.
Hoffmann. <sup>33</sup>	1	1		Acute case, local and general reaction.
Veiel. <sup>11</sup> (Collected cases).	119	1	?	1—(Same case as local reaction.) (Does not state number of injected cases.)
Schweineger and Buzzi. <sup>32</sup>	3	0	0	3
Haub. <sup>33</sup>	2	1	1	
Kaposi. <sup>34</sup>	?	1		
Schwimmer. <sup>35</sup>	2	0	2	1

DUE TO TOXINS, NOT OF TUBERCULOUS ORIGIN.—This theory, as stated by MacLeod<sup>12</sup> is based on (1) Symmetry of the lesions. (2) Macroscopic and microscopic resemblance to various toxic erythemata. (3) Association of lupus erythematosus, especially the disseminated form, with various forms of general toxæmia, as nephritis, hepatic lesions, alcoholism, etc.

Galloway and MacLeod<sup>37</sup> place lupus erythematosus with the toxic erythemata, basing their opinion on the above given points, and also on the comparative microscopical appearance of the lesions of lupus erythematosus and erythema exudativum multiforme. They claim the difference between the two sections is more one of degree, whereas in erythema multiforme we have a virulent toxin acting on the skin in situations where the circulation is good, while on the other hand we have in lupus erythematosus a less virulent toxin, acting for a longer period on situations where, for anatomical or other reasons, the circulation is feeble, and resulting in a mild chronic inflammatory disturbance, followed by atrophy due to imperfect repair. In fact, the two diseases are so closely allied in certain cases as to be regarded as the ends of a chain, between which all transitional stages may be encountered, both diseases being due to toxins of various kinds and degrees of virulence.

\*Neisser<sup>36</sup> makes the statement that where tuberculin fails to show a reaction, no tubercle bacilli are present.

Pernet<sup>38</sup> collected ten cases of disseminated lupus erythematosus and remarks the resemblance to erythema multiforme, and Ormsby<sup>93</sup> also notes the similarity, while subjective symptoms often bear out the resemblance, tonsilitis and rheumatism being noted in lupus erythematosus by Little<sup>39</sup>, Pernet<sup>38</sup>, Stern<sup>40</sup>, Philippson<sup>41</sup>, and the author. Tommasoli<sup>51</sup> believes the disease is due to a toxin (*i. e.*, decreased elimination or increased production of the ordinary reduction products or toxic substances), and the result is due to a pathological or physiological weakness of the eliminating organs.

LESIONS OF KIDNEY AND LIVER.—Galloway and MacLeod<sup>47</sup> claim diseases of the kidney and liver are found more frequently in connection with this disease than the lesions of any other organs, and Sequeira and Baleau<sup>13</sup> find albuminuria in five out of seven diffuse cases and two out of seventeen of the discoid form. Fordyce<sup>42</sup> reports a case with renal tuberculosis and hepatic cirrhosis at autopsy and likewise Gunsett<sup>16</sup>, Kreibich<sup>43</sup>, Koch<sup>44</sup>, Little<sup>39</sup>, McDonough<sup>45</sup>, MacLeod<sup>46</sup>, Galloway and MacLeod<sup>47</sup>, and Short<sup>45</sup>, report various renal and hepatic lesions, while Reitman and von Zum Busch<sup>49</sup> report six cases of the disseminated form, in four of which hepatic lesions were present and also renal lesions in four. Pollard<sup>50</sup> states heart lesions, and liver, and kidney diseases with albuminuria are predisposing factors, while in the author's cases (13 in number—12 discoid form) albumin was only present in the acute case, and then only after the change from the discoid to the disseminated type, with resulting death with all the symptoms of a profound general toxæmia. The small percentage of occurrences of lesions in the kidney and liver in the discoid form, is not sufficient evidence to bring it forward as an ætiological factor, but the almost constant appearance in the disseminated form compels its recognition.

That we have a profound intoxication in the disseminated form, can hardly be doubted, but at present, it is questionable to the author whether the condition is due to renal, hepatic or other organic lesions which prevent the elimination of the toxins, or, whether the body, overwhelmed with toxic products, is unable to dispose of them, and the renal, hepatic, and other lesions are the result of the intoxication.

It is interesting to note that Fox<sup>89</sup> and von Zum Busch<sup>91</sup> note the occurrence of the Wassermann reaction in the disseminated form of lupus erythematosus.

VARIOUS THEORIES.—Ravogli<sup>1</sup> described certain cocci, in, and between the horny cells, which he believed were the ætiological factors,



and Johnston and Robinson<sup>78</sup> believe it is a local infectious process, while Heidingsfeld<sup>81</sup> speaks for a local infectious disease.

Hallopeau claims it is due to a peculiar variety of the tubercle bacillus; Jadassohn<sup>92</sup> suggests the possibility of ultra-microscopical bacilli and Brocq<sup>25</sup> believes there are two varieties of the disease, one due to tubercle bacilli, the other being due to uterine, stomach, bowel, or nerve disorder, while Jamieson<sup>82</sup> suggests the possibility of it being an angioneurotic form of tuberculosis due to the presence of tubercle bacilli in the nerve trunks.

NERVOUS ORIGIN.—Kreibich<sup>79</sup> and Kraus and Bohac (cited by Polland) believe it is due to an irritation of the vasomotor centres, due to some toxin, eventually causing an atrophy, and Bulkley<sup>70</sup> believes it is a vasomotor neurosis, and this theory is more or less borne out by the fact that the affected areas do not correspond either to nerve or blood vessel distribution. The only approach to proving a nervous origin for this disease, was the case reported by Biach<sup>80</sup> who found, in a case of long standing discoid lupus erythematosus, with an acute exacerbation, evidence of long-standing changes in the ganglions, together with evidence of acute inflammation of the medulla, meninges and cervical portion of the spinal cord, but unless we can find more tangible evidence of nerve lesions directly connected with the disease, this theory must remain an open question.

CIRCULATORY DISTURBANCES.—That circulatory disturbances are a potent factor in the causation of this affection must be admitted, but it is doubtful whether they have any more than a predisposing relationship. The symmetry of the lesions, the fact that they are usually situated where, for anatomical or other reasons, the circulation is poorest (*i. e.*, ears, nose, scalp, cheeks, and backs of fingers), the fact that the skin of these areas is comparatively thin and stretched over bone or cartilage and the frequent occurrence in those of high color, or who flush easily, all tend to show a distinct connection with the circulation, and this is verified by the microscopical sections, which show that the vessels are the first structures affected. Crocker<sup>4</sup> describes a telangiectic form and Sequeira and Balean<sup>13</sup> believe a feeble circulation, cold, livid hands and a tendency to chilblains favor lupus erythematosus and MacLeod<sup>16</sup> concurs in this idea. Little<sup>52</sup>, Pringle<sup>53</sup>, Engman and Mook<sup>54</sup>, and others, report its occurrence in conjunction with Raynaud's disease, while Sequeira<sup>55</sup> had a case simulating Raynaud's.

Unna<sup>84</sup>, Walker<sup>85</sup>, Adamson<sup>56</sup>, Crocker<sup>57</sup>, Buri<sup>58</sup>, McDonough<sup>45</sup>, Hutchinson<sup>59</sup>, and many others remark the frequency with which it occurs conjointly with chilblains, and Ward<sup>60</sup>, in analyzing 15 cases, found chilblains in 8, syncope in the fingers in 3, cold extremities in 2, telangiectases in 1, and, as a matter of fact, it is often difficult to state just where the line of demarcation between chilblains and lupus erythematosus should be drawn. Ward<sup>60</sup> believes, in the great majority of cases, that the patients suffer from some anomaly of circulation that leads to an impairment of nutrition of the peripheral vessels, so that they are unable to bear the strain laid upon them by the ordinary body requirements or external irritation. Holder<sup>60</sup> and Fordyce<sup>61</sup> believe it is due to a local thrombosis of the papillary blood vessels and Lusk<sup>67</sup> believes it is a vasomotor disturbance predisposed to, by a feeble circulation, while Stern<sup>40</sup> notes an increase of the disease at the time of the menopause. Fordyce<sup>61</sup> reports a case disappearing during pregnancy and a second case which also disappeared, but recurred, and Pusey<sup>64</sup> reports a case disappearing after the removal of uterine myomata; although in the author's experience, pregnancy alone, had no appreciable effect.

To sum up, in view of the above evidence, one might say that circulatory disturbances enter into the causation of lupus erythematosus as a more or less definite factor and chiefly as a predisposing agent.

## SEX.

Author.	%Men.	%Women.	Note.
Kaposi.	33 1/3	66 2/3	Also Jarisch, Veiel, Neisser, Stelwagon (Text Book), Schamberg (Text Book), Hyde, <sup>66</sup> Jackson. <sup>53</sup>
Sequeira and Bailean. <sup>13</sup>	15.4	84.6	
Buri. <sup>63</sup>	10	90	
Pusey. <sup>64</sup>	25	75	
Crocker. <sup>57</sup>	20	80	
MacLeod. <sup>12</sup>	30	70	
Voirol. <sup>87</sup>		100	Five disseminated cases.
Author.	32.8	67.2	

Hyde<sup>15</sup> believes the preponderance in females is due to the delicate skin, unprotected by beard, and the tendency to flushing.

COMPLEXION.—Hutchinson<sup>59</sup> believes it occurs more frequently in blondes than brunettes, owing to the more delicate skin (18 out of 26 cases).

Author.	AGE OF PATIENTS.		Average.
	Youngest.	Oldest.	
Ward. <sup>68</sup>			76½% between 20 and 40. 46½% " 20 and 30.
Stelwagon. <sup>69</sup>			18-40
Sequeira and Balean. <sup>13</sup>	11	68	18-45
Crocker. <sup>57</sup>	6	71	
Jamieson. <sup>71</sup>	6		
Dubreuilh. <sup>72</sup>	5½		
Ward. <sup>69</sup>	9		
Stowers. <sup>73</sup>	5		
Róna. <sup>74</sup>	2		
	2		
	2		
Juliusberg. <sup>75</sup>	5		
Roth. <sup>27</sup>	7		
	8		
Galewsky. <sup>76</sup>			Collected cases. { 17 cases 2-10 years } { 10 cases 16-24 years } 30-45
Buri. <sup>63</sup>			
Kaposi. <sup>62</sup>	3		
Hyde. <sup>66</sup>			About 30
Schanberg. <sup>74</sup>	4		
M. Morris. <sup>77</sup>			25-45
Jackson. <sup>53</sup>			Rarely before puberty.
Little. <sup>86</sup>	4½		Disseminated form.
Author.	16	52	

INFLUENCE OF LOCAL IRRITATION.—Sequeira and Balean<sup>13</sup> note the occurrence of lupus erythematosus following the application of poultices, Finsen lamp treatments and scratching, Whiteside (see 13) following a cantharides blister and Morris<sup>78\*</sup> following a mosquito bite. Bunch<sup>28</sup> believes seborrhœa and rosacea may determine its location, while Little<sup>29</sup> reports a case recurring after an attack of sunburn and Engman and Mook<sup>54</sup> note the occurrence of a case on the basis of a dermatitis venenata. Kopp<sup>14</sup> believes the lesions are due to external irritation, while Hyde<sup>65</sup> thinks the location of the lesions (*i. e.*, the exposed surfaces) point to external irritation, with preceding loss of resistance due to some internal factor.

Undoubtedly the thin, more or less tightly stretched, uncovered skin is particularly exposed to climatic changes and insults of various kinds and, if we have as a basis, a weak peripheral circulation, or a strain on the delicate blood vessels due to reflex congestions, as blushing, menstruation, pregnancy, etc., or a toxin circulating in the blood, it is conceivable that any external irritation may act as a factor in causing this disease.

CONCLUSIONS.—That the disease is not tuberculous *per se*, is evident, but the question as to whether it is due to a tuberculous or other toxin is not so clear. Probably the truth lies somewhere between the two extremes; that is to say, that the disease is caused by a toxin, carried by the blood, as evidenced by the fact that the blood vessels are the first structures to be affected, and while tuberculosis or a tuberculous inheritance may predispose to lupus erythematosus by lowering the general resistance, it is certainly more of a predisposing than a causative factor.

That it is a constitutional affection is clearly shown in those cases which pass over into the acute fulminating type, where the patient shows all the symptoms of a profound toxæmia with involvement of various internal organs, especially the kidneys; but the cause of the toxæmia cannot be laid to any single toxin.

That feeble or deranged circulation, trauma and irritation, are factors in the causation of this affection is also evident, but whether the toxæmia precedes the local irritation and the external lesion is the exciting factor, or whether the skin damaged by the external lesion presents less resistance than the remaining cutaneous envelope to the circulating factor, is a question to be determined.

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## THE ST. LOUIS MUSEUM FOR DISEASES OF THE SKIN.

By DOUGLASS W. MONTGOMERY, M.D., San Francisco.

ONE day while in the Museum of the St. Louis Hospital in Paris I happened to hear some one greet M. Baretta, and on looking up saw a neatly dressed, short, well-built, elderly person, with gray hair and moustache. I was pleased to have the opportunity of introducing myself to a man who, though not a physician, has done so much for the study of diseases of the skin.

Baretta is an artist who has succeeded in depicting skin lesions as no one else ever has. There are in this museum alone over three thousand one hundred and sixty-four colored moulages, and there are a great many replicas of them scattered over the world, and all the work of this one man, unaided, as he leaves no pupils and his work is almost finished. He is sixty-eight years of age, and since receiving the decoration of the Legion of Honor, of which he is justly proud, has practically retired. The moulages are not painted, the color is in the substance of the mass and does not deteriorate with age. He drew my attention to some that were made over thirty years ago, and were as fresh looking as if finished yesterday.

The difficulties in the way of representing the skin are immense. In the first place there is something intangibly beautiful about it that is best illustrated, as remarked by Woods Hutchinson, by the inadequacy of the similes used in describing it. The skin is said to resemble marble, or ivory or cream, and if a man had a skin like any of

these, he would be a monstrosity. Above all, the skin is transparent and the colors in it, such as that of the blood, shine through it, while marble, ivory, and cream are opaque, and their colors do not shine through them, but are produced on the surface. The colors used in painting are also frequently opaque, and this is one of the chief reasons why the skin is so often poorly represented in pictures. In this regard it is interesting to observe the beautiful transparency of the skin in the pictures of Rafael and his contemporaries. As Baretta remarked, these men mixed their own colors, and they endure to the present day. Once, in crossing the North Atlantic, an incident occurred that showed me admirably this transparency of the skin. A stoker jumped overboard, and before the boats could be lowered he was quite a long distance from the ship. An Italian standing on the forecastle finally located him by the seagulls wheeling about the poor fellow's head, watching for an opportunity to pick out his eyes. His head could be distinctly seen as a brilliant pink ball on the leaden-colored sea. The pink was the color of the blood shining through the white, transparent skin of his face. After being rescued, and as he lay in a faint in the bottom of the boat his skin was as dead white as that of the corpse in Rembrandt's Anatomy. All the blood had retired to the interior of the body.

As M. Baretta was showing me some of the models, I pointed to one representing perfectly the highly polished nails in onychogryphosis, and remarked how difficult it must be to get that brilliancy. "No," he said, "as the substance is as hard as stone, it has only to be rubbed to make it glisten." "But this, on the contrary, is difficult," and he took down a model showing beautifully the different nuances of red where a drop of sporotrichotic serum had been injected into the skin. The difficulty lay, as previously mentioned, in representing the red as showing through the epithelial layers of the skin.

These moulages are taken from cases that have been studied out by masters in the art of dermatology, and many of them have formed the subject of important papers. The name of the observer, the diagnosis he arrived at, and frequently the reference to a detailed paper are given with each cast. I do not know any more useful way of spending a half hour than in quietly studying these Baretta moulages. For instance, one moulage showed the heavy black crust, and the snout-like projection in chancre of the upper lip. The appearance is so characteristic that I did not think it possible to be simulated, nevertheless, precisely these symptoms are shown as a

result of cauterization of the middle of the upper lip with sulphuric acid.

One day I stumbled on a cabinet containing moulages of cases in the practice of Professor Fournier, showing how easy it is for different conditions to mimic syphilis. Two nipples were decorated with what appeared to be classic chancres that turned out not to be chancres at all, but sores due to nursing. The most surprising cast of all, however, was one where a papular dermatitis gave a mimicry of condylomata lata.

Condylomata lata are so characteristic of syphilis as to be practically pathognomonic. Only in pemphigus vegetans are similar lesions found, and pemphigus vegetans is such a rare disease and, besides, has other symptoms that are so severe and characteristic as to make the chances of diagnostic error negligible. The surprise on seeing a vegetative dermatitis that imitated the flat papules of syphilis may therefore be imagined. I remember once having seen an infant with a papular intertriginous eczema, where the papules were so large and solid as to cause myself and a colleague no little anxiety before the diagnosis was settled, but I never have seen anything like this vegetative dermatitis of Fournier.

In the collection of casts of tuberculosis of the tongue there was one by Tenneson where the tubercles, the size of a pea, were scattered over the upper surface, and were well circumscribed, raised, rounded and had a little central ulcer at the summit of each. They reminded one of the blow holes in hot metal. In another the tubercles were much larger, had a finely nodulated surface, a light yellow color, and were collected in a group on the dorsum of the tongue, so as to resemble, by their situation and prominence, the tubercles of syphilis.

Another cast of a tuberculous ulcer of the dorsum of the tongue was interesting on account of its resemblance to a gumma.

Gumma of the dorsum of the tongue has a characteristic appearance, which is best appreciated on recalling its pathological anatomy. A gumma in this situation usually starts deep in the muscular tissues of the organ as a firm round ball, that, as it enlarges approaches the free surface. When the periphery of the ball reaches the epithelial covering of the tongue, ulceration takes place, and the degenerated contents of the gumma empty themselves through this little ulcerated hole. This leaves a small slit-like sinus in the dorsum of the tongue leading down into a large cavity, and, as before said,

one of the casts of tuberculosis of the tongue strikingly recalled this kind of gummatous ulceration.

Another cast of a case observed by Hallopeau showed raised tabs of flesh around a central orifice, and resembled the tabs of flesh sometimes seen about the anus.

As time passes along we all of us delight in recalling old experiences, and a model of one of Fournier's cases recalled an interesting epithelioma seen with two old friends, Benjamin F. Swan and George Chismore. In Chismore's case, the patient, an elderly man, had a well-circumscribed, oblong lesion lying in the sulcus. It had a smooth, shiny, depressed surface, and rounded, well-circumscribed borders, and felt like a disc of cartilage. This was the appearance of the lesion when the prepuce was retracted. When the prepuce was drawn forward the lesion was hidden, and Chismore discovered it accidentally by palpation while catheterizing the patient. On retracting the prepuce this lesion arose on its edge, and on passing the centre, snapped over just as a chancre in this situation does.

The microscopical examination in Chismore's case showed an epithelioma where the epithelial infiltrating cells evinced little tendency to undergo degeneration. The surface was covered by a very thin unbroken layer of stratified epithelial cells.

Because of their color, their moisture, and their thin, delicate, epithelial covering, lesions of the mucous membranes are much more difficult to diagnose than those of the skin. It is this that has led Fournier to say that a diagnosis of mucous patches is made because the patient has syphilis, but a diagnosis of lues is not made because the patient has lesions that resemble those of syphilis. This is especially true of that tricky disease erythema multiforme, that occurs at times on the mucous membranes, and occasions lesions strikingly like those of syphilis. There is in the St. Louis Museum a Baretta moulage from a case in the practice of Quinquaud that shows well this mimicry. The lesions are shown as situated on the dorsum of the tongue, and are large, flattened, raised, and irregular in shape, and in some places the borders are thickened, raised, and cushion-like. In this case there were accompanying skin lesions on the hands and forearms that assisted in making the diagnosis. A few days before seeing this moulage I had seen a patient in Dr. Milian's clinic with raised, flattened button-like lesions of erythema multiforme on the mucous membrane of the lower lip, that strikingly recalled those of syphilis. There were no accompanying skin lesions. Some years ago I had a patient, a married woman, with erythema multiforme of

the tongue. She had had repeated attacks, and had wandered from throat specialist to throat specialist with always the same diagnosis of syphilis. And I myself might not have hit on the real nature of her trouble if I had not, just at that time, been paying particular attention in my reading to the diagnosis of the manifestations of syphilis of the mucous membranes. The importance of recognizing these cases need not be insisted upon.

One could go on indefinitely without any fear of exhausting the riches of this museum. The mistake in the midst of such abundance, is in trying to see too much.

### THE RELATIONSHIP OF VACCINE THERAPY TO THE TREATMENT OF CERTAIN DISEASES OF THE SKIN.\*

By D. KING SMITH, M.D., Toronto, Canada.

In 1906, the Department of Therapeutic Inoculation was established in connection with the Toronto General Hospital, under the care of Dr. George W. Ross. During the past five years many cases of diseases of the skin have been referred to this department for treatment and investigation.

I take this opportunity of thanking Dr. Ross for placing at my disposal the results of such investigations.

#### ACNE.

Up to the present about one hundred and fifty cases of acne vulgaris have been under observation. Bacteriologically these were divided into three classes, namely:

- A. Those due to the acne bacillus.
- B. Those due to the acne bacillus and the staphylococcus albus, both of these organisms being present in large numbers.
- C. Those due to the staphylococcus albus, with practically no acne bacilli present.

Clinically it is possible to associate with each of these classes a certain type of lesion.

In class A the chief lesions are the comedone, papules and papulo-pustules. In class B there are papulo-pustules and pustules and in class C deep-seated pustules with marked scarring. There are a

\*Read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 25-27, 1911.



certain proportion of cases in which these sharp lines of demarcation cannot be drawn.

Taking as the basis of treatment the foregoing classification, appropriate vaccines were prepared. For class A a vaccine of the *acne bacillus* was used, the dose being five millions, repeated twice a week. The results in a number of the cases were good, but on the whole, were disappointing; the final conclusion being, that along with general and local treatment, the vaccine is useful.

In class B a vaccine made from the *bacillus acnes* and the *staphylococcus albus* was employed, the dose being five millions of the *acne bacillus* and 10 millions of the *albus*. The results were better than in class A; at least fifty per cent. showed marked improvement.

In class C a vaccine made from the *staphylococcus albus* was used, the dose being 10 millions. The results were excellent.

The prognosis cannot be given in cases of *acne vulgaris* without a bacteriological examination to determine the type of case.

#### FURUNCULOSIS.

The number of cases treated was between seven and eight hundred.

The vaccine employed was prepared from eight to ten strains of the *staphylococcus aureus*, three of the *albus* and one of the *citreus*. The best dose was found to be about 125 millions, repeated twice weekly for three or four weeks. The results were good in ninety per cent. of the cases, marked improvement often resulting after two or three injections. If the treatment was discontinued after three or four injections in quite a large number of cases, relapses would occur, and it was found that as a rule at least eight or nine injections should be given.

Five per cent. of the cases did moderately well, while the remaining five per cent. were failures, the latter including patients suffering from diabetes, Bright's disease and brain-fag.

#### CARBUNCLES.

The results were similar to those in furunculosis. It was noted that the longer the duration of the case, previous to inoculation, the better was the prognosis.

#### COCCOGENIC SYCOSIS.

Fifteen patients were treated. The best results were obtained in the acute cases; sometimes long standing cases responded very rapid-

ly, while in others the results were not very satisfactory. The dose used was 125 millions of the albus—given twice a week.

#### LUPUS VULGARIS.

In the two or three cases treated the results were disappointing. In one case marked improvement was noticed, but the patient could not be kept under treatment so as to judge of the final result.

#### ERYSIPELAS.

The most brilliant results of vaccine therapy were seen in cases of erysipelas.

Perhaps the most striking change in the patient was a rapid subsidence of such symptoms of toxæmia, as mental unrest or even delirium, and of that profound malaise so usual in this disease. Locally, some spread of the process usually occurred until after the second inoculation, which, as a rule, is given the second day.

It is entirely unnecessary to prepare a vaccine for each case. It is, however, advisable to have a composite stock vaccine derived from several different strains, from as many different cases. It is probable that the more virulent the case of erysipelas the more valuable will its streptococcus be as a vaccine. The method of treatment is, in almost every case, to inoculate with 250 millions of the devitalized streptococci, on the first visit, if the case is a severe one, and with 5 millions if it is less severe. On the second day, in the severe cases, the patient gets another injection of 250 millions if there are signs of improvement. The most important of these signs is a clearing of the intellect, and the others are a lessened intensity of the local condition—less tenderness and pain. The temperature is not so satisfactory a guide, although a fall of two or three degrees on the morning following the injection is a valuable indication for a second inoculation. If, however, no evidence of improvement is manifested in the very severe cases, then a small dose is used the second day.

In less severe cases improvement is almost invariably manifest on the day succeeding inoculation and the patient should receive another injection of about 250 millions. The general rule followed is: The more severe the case and the less satisfactory the clinical response the smaller the dose.

The site of inoculation chosen has always been away from the area involved. The results have been so successful by this method

that it has not been felt justified in attempting other measures, such as inoculation near the site of infection.

### ECZEMA.

Over forty cases of eczema were treated by a staphylococcus albus vaccine. The type which responded best was the so-called eczema squamosum. In many of these cases the results were excellent. Pruritus, which was marked in a large per cent. of the cases disappeared very rapidly. By the clinical reaction of these cases to the vaccine we were led to the conclusions that the staphylococcus is not necessarily pyogenic and that it is capable of setting up a dermatitis corresponding to certain types of the so-called eczema.

### DISCUSSION.

DR. VARNEY said that in considering this subject of vaccine therapy, he was inclined to attribute the cause of at least some of the failures to the preparation of the vaccine, and he felt that the old method of killing the organisms by heat, as recommended by Wright, removed some of the therapeutic properties in the bodies of the germs, and thereby impaired the efficacy. Recently, he had selected a certain number of commoner pyogenic skin conditions for the purpose of comparing results obtained in the administration of the heated and the non-heated preparations, trichresol chlorotone being used in the latter to destroy the organism, and personally he had come to the conclusion that the non-heated were the more efficacious. However, time would determine that point more definitely.

In the preparation of the autogenous vaccines, he felt that it was most desirable to obtain the culture from the most active lesions and when possible from two or more lesions. We knew that in boils or carbuncles, after the organism had existed in those lesions until the stage of necrosis developed, it became more or less attenuated, less virulent, and was not as active in bacterial suspension as it would have been at an earlier stage of the lesion. This was also true of all invading organisms. It was most important that the suspension of the organism be made from the virgin culture and not from strains that had been grown several generations sub-cultures.

DR. ENGMAN said that most of the work he had done had been with the stock preparations. He had found that the acne bacillus was a very difficult organism to cultivate. While some cases of acne were due to the staphylococcus, especially the indurated type, the acne bacillus was undoubtedly the active agent. If we obtained definite results in a certain proportion of cases, and then failed to get them in another series, it was possibly due to the technique or to the strain or to the dosage.

The speaker said he had published a couple of papers on the subject of acne vulgaris in connection with vaccine therapy, and he still maintained that his best results had been obtained with the acne bacillus suspensions. In probably 60 per cent. of his cases he got good results—sometimes even brilliant while in a certain proportion he had absolute failures. These he thought were at times due to not getting the proper degree of hyperæmia.

While this problem of vaccine therapy was not yet satisfactorily solved, papers like the one presented by Dr. Smith were a step in the right direction, and pointed the way to more definite and accurate work.

DR. GILCHRIST said the data we were collecting in connection with the subject of vaccine therapy only served to emphasize the complex nature of this problem. Dr. Smith, in his paper, spoke of the good results he had obtained from the smaller dosage, while the speaker said that in his own experience the smaller dosage sometimes produced a condition of anaphylaxis. On the other hand, with large doses he got much better results, which was apparently directly opposed to the experience of Dr. Smith. With the acne bacillus vaccine, Dr. Gilchrist said, he began with a dosage of 100 millions on the first occasion the vaccine was tried and ran it up to 200 millions. After three years experience with this mode of treatment he considered the large doses yielded better results than small ones. With the staphylococcus albus vaccine he began with 300 millions and increased it to 1,000 millions at each dose. At the Johns Hopkins Hospital Dispensary they seemed to get as good results with the stock as with the autogenous vaccines.

*Reporter.*

## SOCIETY TRANSACTIONS.

### NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, March 28, 1911.

WILLIAM B. TRIMBLE, M.D., *President.*

**Acanthosis Nigricans (?)**. Presented by DR. KLOTZ.

Mr. H. A., sixty years of age, born in Germany. As a child he suffered from a swelling of the glands in the cervical regions, which necessitated several operations. Soon after his arrival in America, at the age of sixteen, this trouble ceased and he enjoyed fair health ever since, except that he had to be operated upon for appendicitis about twenty-two years ago. He was married and the father of several children. He was always moderate in eating, drinking and smoking. About a year ago he retired from his business as a haberdasher.

The changes in the skin began about a year ago with increased pigmentation, principally on the face. Last summer severe itching of the scalp set in with rapid loss of hair, dryness of the skin, but hardly any scaling. At the same time the lips and part of the mucous membrane of the mouth became affected and the present condition of the skin developed, gradually extending from the neck to the extremities.

When presented, the scalp showed only a very thin growth of hair, dry but not scaly skin of a dark bronze hue, and here and there small wart-like prominences were visible. The latter appeared in greater numbers, some resembling senile warts, on the face, where the pigmentation was more intense. Similar nodules surrounded the borders of the lips and extended to the mucous surfaces of the mouth. The tongue was very dry with accentuated and partly elongated papillæ, and more or less deep fissures. The pigmentation was most intense on the neck, with certain

changes of the skin extending symmetrically over a large, not sharply defined area, to the lateral portions of the neck and to the back. These changes evidently began, as could be seen in the more recent peripheral portions, with the more pronounced development of the natural fissures and ridges; the surface became dry, rough, brittle and felt like a grid-iron. In the older, central portions, the skin was decidedly thickened by the increase of the papillary portion of the cutis and particularly by the great development of the corneous layer of the epidermis. Here the pigmentation was intense; there were seen small, round, oval or polygonal, papillary elevations, closely arranged in rows, and separated by deep furrows. On the trunk and on the extremities, pigmentation was not generally increased, except on certain regions, which showed conditions similar to those on the neck, but in a lesser degree, according to the time of their development. The axillæ, the inner aspects of the upper parts of the thighs, the flexor surfaces of the knees and recently, both elbows were involved. On the dorsal surfaces of the hands the larger areas were not found, but numerous, more irregularly distributed, warty growths. Over the dorsal aspects of the articulations between the first and second phalanges, areas of the size of a quarter showed dense conglomerations of papillæ. There was no scaling on any of these localities. The nails were not affected.

With the exception of constipation, there were no irregularities in the functions of the important organs, no abnormalities of the urine and the absence of several characteristic symptoms strongly spoke against an affection of the adrenal glands. This was also the opinion of Dr. G. L. Rohdenburg, to whom the speaker was indebted for the report on the general condition of the patient. Under the influence of iron and arsenic the patient gained markedly in health, and relief from the pruritus was obtained by the use of Unna's ointment for lichen planus (zinc ointment with carbolic acid and bichloride of mercury).

DR. HOWARD FOX agreed with the diagnosis and said the case was similar to one shown by Dr. Allen a number of years ago. He had had the privilege of photographing the latter patient, a girl about nine years of age.

DR. KLOTZ said that he had presented the case because he thought it interesting. There was no evidence of any malignant tumor anywhere. The man had been very carefully examined by Dr. Rohdenburg, who found no evidence of any internal disease. The symptoms had become less aggravated within the last two weeks.

#### Case for Diagnosis. Presented by DR. GEORGE HENRY FOX.

The patient was a man, thirty-two years of age, who gave a history of having suffered as a child from swellings in the neck, over the clavicle, in the axillæ and groins. They had disappeared in the course of two years and had not ulcerated. The lesion of the ear began about eleven years ago. He first noticed a swelling at that time behind the



left ear which broke down and discharged. Since then there had been an almost continuous appearance of "sores that discharged thick matter" and that later formed scabs and healed with scarring. Examination showed a considerable loss of tissue of the ears, the lobules being almost entirely missing. The remaining tissue was purplish-red, slightly scaly, infiltrated and pitted. There were a few scars upon the backs of the fingers, following former sores. The condition was worse in mid-winter. The patient also suffered from cold hands and feet. The heart and lungs were apparently normal. The tuberculin test (von Pirquet) was positive.

DR. ELLIOT thought it was a case of lupus vulgaris.

DR. FORDYCE suggested lupus erythematosus rather than vulgaris.

DR. JACKSON thought it a tuberculous process.

DR. WINFIELD thought it was an illustration of the disease described as lupus pernio, or necrotizing lupus.

DR. TRIMBLE said he had seen the patient a number of times at the Skin and Cancer Hospital, and thought it to be a case of lupus pernio. It strongly resembled erythematous lupus and he was inclined to believe that this was the variety of lesion that Hutchinson had called ulcerating lupus erythematosus. It also seemed to fit the name of necrotizing chilblain, as suggested by Allen.

DR. GEORGE HENRY FOX said that the first diagnosis made in the clinic was lupus vulgaris, but most of the men agreed that it was an unusual form of lupus erythematosus, and it was certainly of the necrotizing type described by Hutchinson. He disliked, however, to associate the name of lupus with pernio. Although the patient's circulation was poor and his hands and feet cold, there did not seem to be any reason to think that the condition arose from exposure to cold, or had anything to do with a chilblain diathesis.

#### **Lupus Erythematosus of the Face and Extremities with Multiple Cutaneous Nodules Over the Trunk. Presented by Dr. Fordyce.**

The patient had been under observation for several years for a lupus erythematosus of the bridge of the nose and cheeks. During the last few months there had been a rapid extension until, at the time of presentation, it involved almost the entire face and part of the neck. In addition, the patient had areas of infiltration and atrophy on the extensor surfaces of the phalanges and backs of the hands, with papulo-necrotic lesions on the extensor surfaces of the arms below the elbows. The condition for which he was presented, however, was a curious eruption on the back and chest, consisting of numerous pale, cutaneous nodules, which had developed without the patient's knowledge. They were the size of a pea and larger, painless and could be felt in places where they could not be distinctly seen. They extended from the neck to the lower dorsal region on the back and were scattered over the upper third of the chest and shoulders. The patient at the same time had an enlargement of the lymph nodes in the neck. There were no general symptoms and a histological examination of an excised piece of skin showed a mucoid degeneration of the connective tissue bundles of the corium, with a mild inflam-

matory reaction about the follicles. The glandular structures were not involved.

DR. MORROW said that he voiced the general opinion in saying that it was an absolutely unique case. The nature of the lesion and the ætiology were very mysterious, and he could throw no light upon it.

DR. WALLHAUSER said that it was a most interesting case, and that he had never seen anything like it.

DR. JOHNSTON said that he did not care to express a clinical opinion. The only possibility of diagnosis was in the histological examination.

### **Keratosis Follicularis.** Presented by DR. FORDYCE.

The patient was a man, thirty-four years of age and born in the United States. The eruption began two years ago and at present involved the face, chest, shoulders, axillæ, backs of the hands and the groins. On the chest and shoulders the lesions were distinctly follicular, with extruding, large keratotic plugs. In the other locations they had assumed more of a warty character. In addition to these lesions the patient had a symmetrical keratoderma of the palms and soles, much more marked on the latter and interfering materially with his walking and occupation. His mother, the patient stated, had had a similar condition of the feet for several years.

DR. JACKSON agreed with the diagnosis.

DR. GEORGE HENRY FOX said that this case was like one which had been shown at the American Dermatological Association, in regard to which Dr. Veiel was inclined to doubt the diagnosis, and thought it was a nævus. The appearance on the palms, looking almost like a nævus linearis, was precisely the same as that presented by the patient to-night.

DR. FORDYCE, in response to an inquiry from Dr. Howard Fox as to whether the patient had been treated by the X-ray, replied in the negative. Dr. Fox then said that some of these cases responded very quickly to such treatment.

DR. TRIMBLE thought that the case, although not a very extensive one, was a very plain one from a clinical standpoint. The location of the lesions, the appearance of the face and the keratotic tendency on the hands, were all indications. The patient presented himself ten days ago at Dr. Fordyce's clinic and had had no treatment except for the feet.

DR. JOHNSTON said that it was the third such case that had been presented before the Society.

DR. ELLIOT said that thirty-odd years ago, at the old Skin and Cancer Hospital, he had had a patient—a Mrs. S., who had the same disease. The condition was most intensely marked on the palms and soles. Scrapings of these showed the characteristic condition. Her daughter had the same disease, as did also her daughter's daughter—three generations.

### **Negro Child with Nævus.** Presented by DR. WINFIELD.

DR. Winfield said that the father of the child wished to show the case in order to find out whether anything could be done to relieve the condition. There was evidently a lipoma with the nævus. The father wished to obtain the opinion of the members as to whether carbon dioxide snow could be used, so that the child could have the use of the eye. DR.

Winfield expressed the opinion that surgery was the only thing which would relieve the condition.

DR. JACKSON thought that surgical interference was the only thing that would do any good.

DR. TRIMBLE thought that surgery would be more effective than the solid carbon dioxide.

DR. WALLHAUSER said that he had treated a similar case, though not in the same location. The growth had the same soft sacculated characteristics; it extended across the neck from the lobe of one ear to the other, and hung down over the upper border of the sternum. This case was treated with the solid carbon dioxide with a perfect result. The treatment was applied at intervals of two weeks, and extended over a period of about one year. Replying to a question from Dr. Sherwell, Dr. Wallhauser said that about three applications were made at each treatment; one in the middle of the growth and one at each end, using a piece of snow about the size of a twenty-five-cent-piece, with firm pressure for about fifteen or twenty seconds. No sloughing followed the applications.

#### Case for Diagnosis. Presented by DR. GEORGE HENRY FOX.

The patient was a woman, forty-five years of age, brought to the Society by Dr. Wallhauser. She presented an erythematous eruption of the face, neck and arms, and forearms. The patches were ill-defined, reddish in color, dry, the seat of moderate burning sensation and of slight scaliness. There had never been any oozing. The eruption appeared suddenly about seven months ago without any known cause. A diagnosis of pellagra had been suggested.

DR. JOHNSTON said that the case did not seem to belong to the pellagra group from lack of pigmentation, mental and intestinal symptoms. It was probably a toxic dermatitis. The action of sunlight could be excluded as an ætiological factor from the distribution of the eruption. He was inclined to think the condition was due to some internal derangement.

DR. SHERWELL said that the case bore an external resemblance to the pellagra which he had seen, but in many ways it did not correspond. One would look for more mental habitude or psychic disturbance. Then the patient had lived on a mixed diet, certainly not on spoiled corn, which was found in districts where the corn spoiled quickly and developed a fungus. The clinical picture, however, up to a certain point was very much like it. He would hesitate to make a diagnosis of pellagra, although it certainly had that appearance. It was certainly not of the ordinary erythematous eczematous group, as it was not attended with the itching which was almost pathognomonic. He expressed the hope that the case would be watched and reported on later.

DR. WINFIELD said that pellagra was presumably a toxic dermatitis, and this might easily be a case of pellagra. Last year a case occurred on Long Island. The patient had never been off the island, and had a dermatitis of some kind last winter which extended rapidly. She finally became insane, and was sent to King's Park Hospital, where a diagnosis of pellagra was made. She had all of the symptoms, psychic as well as physical, and finally died. It was decided to be a true case of pellagra. She had never eaten much corn meal, but had lived on a mixed diet. The woman was a farmer's wife, living near Glen Cove, and the case appeared very much like the present one at the beginning.

DR. WALLHAUSER in reply to an inquiry from Dr. Sherwell as to whether the woman had had any treatment with ergot, said that she had had no medicine at all.

DR. WINFIELD told of another case, a young girl who had taken large doses of ergot for a long time and presented much the same appearance.

DR. HOWARD FOX had recently had the opportunity of examining carefully the patient by daylight and did not consider the case to be one of pellagra, although at first glance it bore some resemblance to that disease. The lesions did not have the peculiar yellowish appearance of the pellagrous dermatitis, but were too reddish in color. The lesions upon the arms, while symmetrical, did not have a sharp, circumscribed border and did not extend upon the anterior surface of the wrist. They had, furthermore, existed continuously for many months without change and had given rise to subjective symptoms that were characteristically absent in pellagra. Against the diagnosis of pellagra should also be mentioned the absence of gastro-intestinal symptoms such as diarrhœa and the characteristic tongue, and also symptoms referable to the nervous system. Dr. Fox hesitated to make any positive diagnosis. He thought the case might be one of erythema perstans, but felt sure that it was not pellagra.

DR. JACKSON said that it certainly looked like a case of pellagra, but that it was very unusual to have a case of this disease last all winter. It usually faded out in the winter and recurred in the Spring. The lesions on the face and neck reminded him of a case which he saw years ago—a young woman who was badly sunburned. He watched the case for some time; there was a scaly, chronic erythema, which finally developed into a beautiful case of lupus erythematosus. The present case had very much the same appearance, but he could not make a diagnosis.

DR. FORDYCE said that it was a persistent dermatitis of some kind, and one should bear in mind the possible development of mycosis fungoides. The lesions on the face and forehead suggested that.

DR. TRIMBLE said that his experience with pellagra was very limited, but this one looked very suspicious of that disease, judging from what he had read and the photographs he had seen.

DR. WALLHAUSER said that when he first saw the case without asking any questions, judging from the picture, he had scarcely any doubt as to the condition. Dr. Fox had referred to the gradual shading off of the lesions; when first seen many of the lesions were sharply defined. Unquestionably, however, there were some conditions lacking to make the diagnosis. He had thought of one other condition which the dermatitis resembled. Some years ago he had shown before the Society, a case of pityriasis rubra of the Hebra type. The eruption in the present case was strikingly similar to the other one; it had the same peculiar deep purplish-red color. If it became generalized, there could be no question about the diagnosis, but at present he believed it to be pellagra.

### Morphœa Associated with Goitre.

Presented by DR. HOWARD FOX.

The patient was a woman, forty-four years old, who had been previously presented before the Dermatological Section of the Academy of Medicine (*Jour. Cutan. Dis.*, 1908, xxvi, p. 369). At that time she presented a number of well-marked patches of morphœa upon the right side of the face that had followed a traumatism eighteen months before. The patient was presented to show the spontaneous disappearance of the greater part of the eruption.



**Multiple Keloid.** Presented by DR. HOWARD FOX.

The patient was a Russian girl, twenty years old. About nine months ago, while at the beach, her face, arms and chest had become severely sunburned. A week later, an eruption of "pimples containing matter," appeared upon the chest, for which she used some strong, dark, ointment. A month later, the lesion became keloidal. Four months ago there were about twenty-five discrete pea to bean-sized, elevated, rounded, pinkish keloids. Since then about half of the lesions had flattened and partially disappeared without any special treatment.

DR. KLOTZ said that the interest in the case centered in the question as to whether the keloids were due to the effect of the sun or of the ointment. He was inclined to think that the remedy which was applied was the cause of the condition.

DR. MORROW said that it was not improbable that the tumors were due to a sort of solar traumatism, if that term might be used. He had seen several cases where keloids developed as the result of the local application of chemical agents to the face, and in this case it may have been due to the effect of the local application.

DR. WINFIELD thought the action of the sun and the irritating ointment could easily account for the condition. He had seen small keloids appear after the application of croton oil.

DR. TRIMBLE said that he was inclined to believe the patient's story. She claimed that she was on the beach wearing an open-work waist, and the chest became sunburned. He thought that that was the ætiological factor.

**Lupus Vulgaris.** Presented by DR. TRIMBLE.

Dr. Trimble said that the patient, when first seen by him, had a typical patch of lupus vulgaris on the nose. It had been treated with the X-ray, with a very satisfactory result, although a few dilated blood vessels had later appeared in the scar. The few tubercles now present might be considered in the nature of a recurrence. The patient's troubles began about ten years ago, when one nostril became obstructed; this was relieved by a small operation in a nose and throat clinic.

After a time the nostril again became obstructed and some superficial ulceration was noticed, just at the mucro-cutaneous junction; this eventually spread to the outside and produced the patch of lupus. The lesion was so typical that the speaker had taken the case to the clinic for lecture purposes, and the diagnosis had been confirmed by Dr. Fordyce. It was decided to treat the recurrence by boring each tubercle with a dental burr, dipped in carbolic acid, the method suggested some years ago by Dr. George Henry Fox. While this was being done one of the lesions bled profusely; some of the blood was collected for the Noguchi test, and it proved on examination to be positive.

It was thought that the carbolic acid mixed with the blood had some influence, and a specimen for the Noguchi test was taken from the ear. This proved to be negative. A small experiment was then tried with a



known negative serum. Into each of three tubes a minim of carbolic acid was added, one 95%—one 50%—one 20%, and all three proved to be positive. Another test was made on blood collected from the patient's ear, with a negative result. Whether a weaker solution of carbolic (less than 20%) would render a negative blood positive to the Noguchi test had not as yet been determined.

DR. WILE said that he could suggest no other reason for the apparent deviation of the complement than that possibly the carbolic acid interfered in some way to prevent a hæmolysis. Many drugs would do that. He had not known of carbolic acid, but other substances placed in the Wassermann test would prevent a solution of the blood from taking place.

DR. SCHWARTZ remarked that in complement fixation work one should avoid any excess of acid or alkali, as they both interfered with the action of the complement. He was not surprised that the 95 per cent. carbolic acid produced the effect reported.

DR. TRIMBLE said he thought a very small percentage of carbolic acid would probably make the test positive. He intended to pursue the investigation further.

#### **Necrotic Granuloma.** Presented by DR. TRIMBLE.

The patient was a woman, forty-one years of age; single. When presented, the lesions consisted of numerous small scars scattered over the face and body. When first seen she had one active lesion, about the size of a bean, which was necrotic in the centre and discharging. She gave a history of being able to feel the lesions before they became visible. After a variable time they opened, discharged, healed up, and left a scar. The Wassermann test was negative. The tuberculin test was positive. The patient had improved under "mixed treatment."

#### **Lupus Erythematosus Disseminatus.** Presented by DR. WHITEHOUSE.

Anna L., fifty-five years of age, Italian, housewife. The eruption began seven months ago as scaly, red, itchy patches upon the face, gradually spreading by the development of new patches and fusion of others into more diffuse areas, until much of the cheeks, nose, chin, forehead, front and sides of the neck and ears became involved as shown when presented. Besides the head and face, there was a triangular area, about three inches across, on the upper part of the chest in the median line over the inner ends of the clavicles. Likewise, the backs of both hands and extensor surfaces of the forearms were invaded, nearly to the elbows. With the exception of an ill-defined patch on the crown of the head, resembling seborrhœic dermatitis, the remainder of the cutaneous surface was unaffected.

The eruption, as a whole, had a bluish-red color, was moderately infiltrated, and covered with dry, firmly adherent scales, which, when torn off, displayed sebaceous plaques attached to their under surfaces. There was a large bat-wing area over the nose and fronts of both cheeks, with

sharp definition and perfect symmetry. Both external ears were diffusely affected, the disease ending posteriorly at the junction with the head. Smaller, disseminated, and for the most part circular patches, about half an inch in diameter, were scattered over the front and sides of the neck. There were several patches, the size of a split pea, on the upper lip, a few extending on to the vermilion border. There was a diffuse, irregular patch on the back of each hand, about two inches in diameter, and a more or less diffuse area, with outlying patches, covering the greater part of the extensor surfaces of both forearms. There was no evidence of atrophy to be found. Burning and itching was intense at times, with a history of periods of subsidence and exacerbation. The buccal mucous membrane was free.

DR. FORDYCE thought the case was lupus erythematosus. The condition of the ear would, in his opinion, establish the diagnosis.

DR. GEORGE HENRY FOX agreed with Dr. Fordyce.

**Tuberculide, Lupus Erythematosus and Bazin's Disease.** Presented by  
DR. FORDYCE.

The patient was a woman, twenty-five years of age, Russian. The eruption began five years ago as papulo-necrotic lesions limited at first to the extensor surfaces of the forearms. Later, the face, arms, buttocks and legs became involved. Within the last year she developed large indurated lesions on the legs, which simulated closely Bazin's disease, and during the past eight months a red, scaling atrophic patch on the scalp having the features of lupus erythematosus. A Wassermann test was negative, while the Moro reaction was strongly positive. During the past four months she had been treated with tuberculin, and her condition had decidedly improved.

DR. SHERWELL thought it a case of Bazin's erythema.

DR. TRIMBLE said he thought the lesions on the leg were those of erythema induratum; and it was a case of this disease occurring in a patient who already had lesions of necrotic granuloma on other parts of the body. He had seen one other similar case.

DR. FORDYCE said that the clinical picture of tuberculides was becoming clearer all the time. It was not unusual to see Bazin's disease associated with tuberculide in distant parts of the body. We were unable to make the sharp distinctions that were made formerly.

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## PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building on January 9, 1911. DR. CHARLES N. DAVIS, *President*.

**Darier's Disease.** Presented by DR. HARTZELL.

The patient presented was a young man, who had had the condition for some years. The lesions were chiefly located on the left side of the abdomen and were unusually inflammatory in appearance. Photomicrographs were exhibited proving the diagnosis. The case was to be reported in detail at a later date.

**Seborrhœic Eczema, Resembling Psoriasis, in an Infant.** Presented by DR. SCHAMBERG.

The little patient, a baby of eight months, had had the present eruption, according to the mother, for three months. The buttocks, the penis, the scrotum, the gluteal folds and the popliteal spaces were attacked by sharply marginate, mostly superficial, pinkish-red, slightly scaly, split-pea to silver-dollar-sized lesions. One of the larger lesions, in the gluteal region, was thicker than the others and had a silvery-white scale, practically indistinguishable from psoriasis.

DR. STELWAGON said that he thought the present case was one of seborrhœic eczema, although it resembled markedly a psoriasis.

DR. HARTZELL thought the border line between the two diseases was in certain cases almost impossible to determine.

**Syphilis Treated with "606" (Exhibited at the Last Meeting).** Presented by DR. SCHAMBERG.

Dr. Schamberg presented the patient, exhibited at the last meeting, with the gummatous ulceration of the lower lip. The lesion was now practically healed. The treatment had consisted of several injections of mercury, apparently without improvement, the healing having occurred since one injection of salvarsan; 0.5 gm. had been administered. The woman had developed a tumor over the right sterno-clavicular articulation, suggesting the possibility of a gumma, but it was probably an enlarged gland.

**Verrucous Lichen Planus.** Presented by DR. STELWAGON.

The patient, a male of forty-four, had noticed the first appearance of the present eruption four years ago. There was a palm-sized elevated area over the upper part of the tibia, with a verrucous surface, violet in color and with whitish scales. Smaller patches of the same character were noted on the lower portions of both legs. Some of the papules on the lower legs had been excoriated. There was intense pruritus.

**Tubercular Syphiloderm (?)**. Presented by DR. STELWAGON.

A male of thirty-one years was presented with an eruption of fifteen months' duration. There was a palm-sized area below the angle of the right lower jaw, which had originally started as a small papule. The lesion was sharply marginate, with a somewhat raised border, consisting of dark-red nodules, with a slight scale on the surface; the central portion was slightly depressed, of a pinkish color and showed a considerable amount of scarring. The patch was distinctly infiltrated.

**Marked Œdema of the Eyelids**. Presented by DR. STELWAGON.

A boy of thirteen years was exhibited with marked swelling of the eyelids. The condition apparently first developed some seven years ago, following an almost continuous conjunctivitis. Various preparations had been used on the eyes, which caused a pronounced inflammation of the skin of the eyelids. At the present time there was so much swelling that the lids could be opened only by the patient wrinkling the forehead, showing the muscular effort required. The lids were of a pinkish-red color, the skin was somewhat roughened and wrinkled, swollen at least four times the natural size, and were greatly thickened and infiltrated. The eye-lashes had all fallen out.

DR. KNOWLES said that he had had charge of the patient some three years ago at the Children's Hospital, and although the case was followed for some months no improvement occurred.

DR. STELWAGON mentioned the resemblance to a beginning elephantiasis.

**Unusual Syphilide**. Presented by DR. FRESCOLN (by invitation).

The patient presented was a white woman, married, forty years of age, who had had three children, one of whom had died. Five weeks ago a papular eruption appeared on the head, the neck, and the face. There were the usual concomitant signs of syphilis present. The alopecia was most marked; the entire scalp was practically bald, simulating alopecia areata. Several distinct types of eruption were present; large flat pustular on the scalp resembling somewhat the extreme type of eruption found following the administration of the bromides or the iodides; the annular type was represented on the face, chiefly in the neighborhood of the mouth, and a macular and papular outbreak was noted on the trunk and the extremities.

**Bullous Erythema Multiforme**. Presented by DR. FRESCOLN (by invitation).

A male of twenty-seven years was presented with a recurrent attack of this disorder, the first having occurred in July, 1909. The patient was admitted to the Philadelphia Hospital for chronic alcoholism and practi-

cally in a state of delirium tremens. Two weeks ago, while in the alcoholic ward, the present outbreak developed. Bullæ involved the palms of both hands, the soles of the feet, the mucous membrane of the lips and of the tongue. Some of the bullæ were pigeon's-egg in size. Hæmorrhage had occurred into some of the blebs. A few lesions of the usual type were present on the dorsal surfaces of the hands and feet. The mucous membrane of the mouth had been involved during the previous attack. There was no history of rheumatism.

**Extensive Lichen Planus (Exhibited at the Last Meeting).** Presented by DR. SCHAMBERG.

The case of linear lichen planus presented by Dr. Davis at the last meeting of the Society was exhibited by Dr. Schamberg. The eruption showed a marked improvement. The patient was shown because of the pronounced lustre of the finger-nails.

DR. HARTZELL said that he had noted the shiny condition of the nails in certain cases where a resorcin lotion was being used.

**Syphilis Treated with "606" (Exhibited at the Last Meeting).** Presented by DR. DAVIS and DR. WALKER.

The case was exhibited to show the marked improvement that had occurred during the last four weeks, an injection of 0.6 gm. having been administered. Dr. Knowles exhibited a photograph of the case which had been taken before the treatment was instituted.

**Sharply Marginated Eczema (?).** Presented by DR. DAVIS.

The patient, a male of thirty years, was born in Austria and had served for some years in the United States Marine Corps. While serving in Panama the present outbreak occurred and he was discharged from the Corps under the impression that the eruption was some Oriental skin disease. The entire left lower leg, from the knee to the ankle, was involved by the one sharply margined patch, the edge of which was slightly raised and brownish-red in color. The central portion was of a dark red and showed some crusting and oozing. There was considerable pruritus in the affected area. The present lesion had lasted for some months.

Those present agreed that the eruption was probably eczematous in character, although of an unusual type.

**Fibroma.** Presented by DR. WALKER.

The patient, a male of seventy-four years, born in Germany, noticed the start of the present lesion at fourteen years of age. The original



lesion was pinhead in size and the growth had been very slow up to October, 1910. About that time the patient was overcome by illuminating gas and rapid development of the tumor occurred. There was now a fist-sized, pedunculated, smooth tumor, pinkish in color, arising from the median line at the middle of the back. The lower edge of the growth showed ulceration and a rough papillomatous surface. A biopsy was performed and the mass was found to be a fibroma. There had been no subjective symptoms. Although no epitheliomatous change was found in the microscopic examinations, the papillomatous condition of the lower edge of the growth was certainly very suspicious of beginning malignancy. The case was referred by Dr. Given. There were two other pea-sized fibromata in close proximity to the large tumor

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

#### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, of the College of Physicians Building, on February 13, 1911. DR. CHARLES N. DAVIS, *President*.

#### Ulcerating Vascular Nævus. Presented by DR. DAVIS.

The patient exhibited was an infant of one year, with a vascular nævus involving the distal portion of the palm of the left hand. The lesion had grown progressively since birth, but had ulcerated only during the last three months. The nævus had attacked fully one-half of the palmar surface of the hand and portions of the thumb, middle, and index fingers. About one-quarter of the lesion exhibited ulceration. Small blood vessels were forming on the dorsal surface of the hand.

DR. HARTZELL referred to an extensive ulcerative nævus of the entire upper arm and shoulder, in which new blood vessels formed around the scar, after healing had occurred.

DR. SCHAMBERG thought that injury to a blood vessel caused thrombosis, leading to ulceration.

#### Benign Cystic Epithelioma (?). Presented by DR. GASKILL.

A married woman, twenty-six years of age, noticed about twelve years ago an eruption on the neck, which started as a small papule and increased, slowly, to the size of a small pea. There had been no pain or itching at any time. The lesions had increased slowly in number and there were, when the case was presented, about one hundred, scattered on the anterior surface of the chest above the nipples. There were also a few posterior to the ears. The lesions were mostly round, some irregu-

lar, yellowish-pink in color, with small telangiectases, not cystic but solid on palpation.

**Case for Diagnosis.** Presented by DR. HARTZELL.

A negro forty-three years of age was presented with a curious eruption on the nose, of thirteen months' duration. The lower portion of the nose, chiefly the alæ, was attacked by numerous grouped, reddish, hard, large pinhead-sized lesions. Palpation and inspection made these lesions appear as solid papules and naturally made the diagnosis a papulo-tubercular syphiloderm, but on piercing the lesions with a needle they were found to contain fluid. The patient had been on mercury and iodide for two weeks without changing the characteristics of the eruption. There were also two flat, split-pea-sized, hard papules on the cutaneous surface of the upper lip and a lesion resembling a mucous patch near the left commissure. The lesions on the nose resembled markedly a lymphangioma circumscriptum.

**Seborrhœic Eczema (?). Two Cases.** Presented by DR. HARTZELL.

A woman of twenty years presented an eruption of two months' duration. The outbreak consisted of annular patches, mostly sharply marginated, some fading into the sound skin, mostly with a slight scale, others resembling psoriasis. Some of the areas exhibited slight oozing. The forearms, the bends of the elbows, the chest, the face, chiefly in the neighborhood of the eyes, and the ears were attacked.

Dr. Hartzell presented a second case, resembling somewhat the previously exhibited patient. A woman of forty years had annular patches on the legs and the forearms of two months' duration. There were almost one hundred lesions in all. The eruption on the back resembled somewhat a follicular syphilis.

Dr. DAVIS referred to several annular cases that he had recently seen at the Pennsylvania Hospital.

**Cheilitis Glandularis.** Presented by DR. SCHAMBERG.

The patient, a male of forty-four, presented an interesting condition of the lower lip, of two years' duration. Five small, but distinct, orifices were noted on the central portion of the vermilion border of the lower lip, from which could be expressed a peculiar turbid fluid. A leucoplakia of the inner surface of the lower lip and the cheeks was also present.

Dr. HARTZELL referred to a case that he had recently had under his care, which exhibited an oozing of clear fluid, without any noticeable changes in the mucous membrane of the lip.

**Papular Eczema of Long Standing. Two Cases.**

Presented by Dr.

FINCK.

The first patient was a girl of seven years, who had had the present eruption since the early age of six months. The arms and the legs were chiefly attacked. The pruritus was intense. The lesions were mostly small pinhead in size. There was a slight resemblance to prurigo mitis.

The second patient was a young woman, with a papular eruption of the extremities of eighteen years' duration. Apparently the outbreak was now under control; the lesions were disappearing and the symptoms were on the mend.

**Atrophia Cutis Maculosa.** Presented by Dr. SCHAMBERG.

The patient, a woman of twenty-two years, was presented with a curious atrophic condition of the skin of four years' duration. The outbreak apparently first started as a small papule which lead to the atrophic retiform scarring. Some of the scars were quite linear and telangiectatic. The active lesions would disappear within a few hours, giving rise to the scars. The skin was pliable, tissue-paper-like, over the scars. There was considerable itching present. During the last few months the condition had been about stationary, no new lesions developing but within the last few weeks numerous active lesions had appeared.

**Lupus Vulgaris Treated by the X-Rays and Skin Grafting.** Presented by Dr. FINCK.

A male of thirty-seven gave the history of having had the start of the outbreak thirty years ago. The patch extended from one inch below the left ear to the clavicle and involved all of the left cheek and the left side of the neck. The patient, a Scotchman, had been X-rayed, in his native country, every day excepting Sundays for three and one-half years. The treatments lasting from fifteen to twenty minutes. As a result of the therapeutic measure a severe burn was produced and skin grafting was successfully performed. Numerous telangiectases surrounded the skin graft and there was a small broken-down area near the chin. The result had been excellent and there was apparently no active disease present.

**Syphilis Treated with Salvarsan.** Presented by Dr. SCHAMBERG.

A patient with a syphilitic eruption had been given an injection of 0.6 gm. of "606" with an improvement in the eruption, but without a cure. The case was exhibited because the area of infiltration, following the injection in December, had ulcerated.

**Case for Diagnosis.** Presented by Dr. SCHAMBERG.

The patient, a male of thirty-eight, was presented with an eruption of two and one-half years' standing. According to the history, the glands

of the left side of the neck were removed at eighteen years of age. The alæ nasi were swollen to almost twice the normal size, infiltration was marked, the skin was dark-red in color and exhibited nodules from large pinhead to pea in size. There was some ulceration of the nasal septum. Vigorous mercurial and iodide treatment had been unavailing. There was also a three-cent-piece-sized lesion on the left cheek suggesting syphilis.

**Ichthyosis.** Presented by DR. SCHAMBERG.

A boy of ten years was presented who exhibited marked roughness of the general cutaneous surface, particularly of the extensor surface. The condition was so marked on the axillary folds that a mild attack of ichthyosis hystrix was suggested. There was also an eczematous outbreak on the face.

**Syphilis Treated with Salvarsan.** Presented by DR. DAVIS.

The patient, a male of about thirty years, had been previously exhibited before the Society with malignant syphilis. A gummatous growth had developed causing the posterior pharyngeal wall to be pushed forward, thereby interfering with swallowing. This condition had been markedly ameliorated by an injection of 0.6 gm. of "606."

**Dermatitis Herpetiformis.** Presented by DR. STELWAGON and DR. GASKILL.

A male of fifty-two was presented with an eruption which had lasted for six years. The patient at times had been almost entirely clear of lesions, but within a few weeks or months there had again been a severe outbreak. The eruption was chiefly of the papulo-vesicular type, although there was an urticarial tendency; there was marked grouping of the lesions. The anterior portion of the trunk was almost free, while the posterior surface was markedly attacked. The shoulders, the upper portions of the arms, the buttocks, the thighs, the forehead, and the scalp all exhibit numerous lesions. The outbreak on the scalp resembled somewhat acne varioliformis. There were numerous scars and pigmented marks where the former eruptions had been. There was intense pruritus.

**Hæmorrhagic Purpura and Psoriasis.** Presented by DR. DAVIS.

The patient, an Italian of seventeen years, came to the Dermatological Department of the Pennsylvania Hospital Dispensary, on January 9, 1911, with an extensive and typical eruption of psoriasis. There was also an associated purpuric eruption on the ankles. The skin was noticeably dry and rough and the follicles on the extensor surfaces of the various articulations were prominent. The boy was admitted to the Pennsylvania

Hospital with severe headache, malaise, pain in both legs and a temperature of  $102.1^{\circ}$  F. After remaining in bed for five days the purpuric exanthem disappeared. On the sixth day the patient walked about the ward; that night marked abdominal distress developed, the temperature became subnormal ( $96^{\circ}$  F.), blood was passed in the stools and a hæmorrhagic eruption again appeared upon the forearms, the abdomen, the back, and the legs. There was also severe epistaxis and blood was found in the urine. Four days later the blood disappeared from the stools. The legs, the feet, and the face became much swollen. The urine showed albumin, hyaline, and granular casts, many leucocytes, and epithelial cells. When the patient was exhibited to the Society there was a fresh purpuric outbreak and pigmentation was present from the former hæmorrhagic eruption.

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

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#### MANHATTAN DERMATOLOGICAL SOCIETY.

October, November and December, 1910.

ALBERT C. GEYSER, M.D., *President.*

Adenoma Sebaceum and Lymphangioma (?). Presented by DR.  
GOTTHEIL.

F. W.; female; fifteen years of age. The eruption appeared between her fourth and fifth years, on her face and back, and had been present ever since; it increased slowly till her twelfth year, and since then had been getting a little paler; but none of the lesions had ever disappeared. She began menstruating two years ago. The entire face was studded with an immense number of minute, rounded or irregular, prominent tumors, the majority of which were very minute, pinpoint in fact, and of a yellowish-pink tint. But on the cheeks, chin, and sides of the nose many of them were larger, up to pinhead size and of a vivid red and almost orange tint. The lesions were soft, solid, and sensitive. On the forehead and neck were two or three different lesions: larger, flat, pale-yellowish-brown, slightly elevated masses. At various places on the trunk were groups of flat, uncolored, and very slightly elevated, pea-sized tumors, looking quite unlike the face lesions, but rather like lymphangiomas; they contained no fluid. Scattered among these, all over the trunk, were immense numbers of extremely minute tumors, of the faintest yellow color, and resembling the smallest adenomata of the face. There were no other degenerative lesions of the skin. It had been impossible to obtain a biopsy.



DR. OULMANN said that the lesions on the face were certainly those of adenoma sebaceum. He was uncertain about the lesions on the back, but he did not think they were lymphangiomata. He would suggest a diagnosis of hydradenoma eruptivum, although it was doubtful if a correct opinion could be formed from a clinical examination.

DR. WISE said that the lesions on the face were typical of adenoma sebaceum, but would not venture a diagnosis of the lesions on the trunk.

DR. MACKEE said that the lesions on the back were very confusing. They appeared to favor the locations where the sebaceous glands were most numerous. The speaker said he hoped that Dr. Gottheil would be able to make a histological study of the tumors and report the result at a subsequent meeting.

DR. GOTTHEIL said a positive diagnosis could not be made without the microscope, but it looked like a combination of angioma and lymphangioma, similar to a case he presented to the Society last year.

#### Case for Diagnosis. Presented by DR. PAROUNAGIAN.

Mr. R.; sixty-three years of age; born in Germany; married. The patient presented a lesion on the glans penis, about the size of a twenty-five-cent-piece, circular in shape, sharply defined and punched out in appearance. The duration was four and one-half months. The lesion was not indurated and the edges were undermined. Dr. H. Schuhmann, who referred the case, diagnosed it as an initial lesion. There was no history or concomitant signs of syphilis. The Wassermann reaction was negative and anti-luetic treatment had not improved the lesion. The speaker thought that epithelioma could be excluded on account of the rapid development and the absence of induration. He also excluded chancre because of the absence of induration and secondary manifestations. Dr. Parounagian favored the diagnosis of gumma.

DR. GOTTHEIL said that he would exclude initial lesion, chancroid and gumma; he regarded the case as an epithelioma.

DR. MACKEE said that the total absence of induration, adenitis and secondary symptoms of lues, together with the fact that the lesion had been present for nearly five months would preclude the possibility of its being an initial sclerosis. The fact that there was no infiltration, no brawny tissue anywhere, no pain and no adenitis, taken with the rapid development, would speak strongly against malignancy. The patient had stated that there was first a painless swelling which ulcerated after a lapse of several weeks. The speaker felt quite sanguine in hazarding a diagnosis of ulcerating gumma. He would suggest a short but vigorous course of anti-syphilitic treatment and if no improvement were noted, to perform a biopsy at once. The negative Wassermann was probably due to the influence of mercury, although occasionally the reaction would be negative in an active tertiary case in which no mercury had been administered prior to the test.

DR. WEISS suggested the local as well as the general use of mercury.

DR. PAROUNAGIAN said that vigorous anti-syphilitic treatment would be instituted and if there were not immediate improvement a biopsy would be made.

#### Lupus Erythematosus. Presented by DR. WEISS.

The patient was a Russian girl, eighteen years of age and a pocket-book maker by occupation. There was a violaceous-colored lesion on

the dorsal surface of the right hand about one and one-half inches in diameter. The centre of the patch was apparently atrophic, while the border was infiltrated and scaly. According to the history, this lesion developed six months previously as a small papule. On the flexor surfaces of the forearms were grouped vesicular lesions and there was an acne eruption on the face. Several of the fingers and toes were a deep-red color.

DR. WISE considered the case to be one of dermatitis venenata—a papulo-vesicular dermatitis, due to an external irritant, of a chemical nature.

DR. OULMANN thought that the eruption was secondary to pediculosis capitis.

DR. GEYSER said that the lesion certainly presented all the ear-marks of having been caused by some external irritant. The patient worked in a pocket-book factory where paste and various chemicals were used, and the lesions were situated exactly where one would expect to find them in occupation eczema.

DR. WEISS admitted that the eruption on the forearms was eczematous and that the exciting cause of those lesions might have been the pediculosis which was certainly present. Again, the girl's occupation might have caused this eruption. But he still adhered to the diagnosis of lupus erythematosus in so far as the hand lesion was concerned, basing his opinion on the configuration, the apparent atrophy, the color, the serpiginous spreading, the raised, hyperæmic and scaly border and finally by the pernio-like appearance of some of the fingers and toes.

### **Lepra Tuberosa and Maculosa. Epididymitis and Orchitis Leprosa.**

Presented by DR. GOTTHEIL.

The patient, a male, twenty-nine years of age, a native of the West Indies, but a resident and a citizen of the United States for many years, entered the City Hospital suffering from an affection that he claimed not to have had long, and whose nature he professed to be ignorant of.

He had high fever, reaching  $104^{\circ}$  F., and was delirious at times. All over his body, and especially on his face and limbs, were numerous, large, inflammatory nodules, mostly marble sized; and scattered among these were many stains and atrophic spots that evidently marked the sites of lesions that had appeared in previous attacks. The tuberculation in the supraciliary region was marked and characteristic; there were various anæsthetic areas on the trunk and limbs; the ulnar nerves on both sides were thickened; there was marked atrophy of the muscles of both hands; and the lepra bacillus was readily demonstrated. Besides this, there was a large scrotal swelling, which examination showed to be due to a hard tumefaction of the epididymis and testicle on both sides, together with a certain amount of fluid in the tunica vaginalis. The patient improved very rapidly; the fever disappeared, the tumors lost their inflammatory features and partially retrogressed; but the scrotal condition remained unchanged.

His treatment had consisted in the administration of nadin. Dr. Fuller, in consultation, advised against interference with the fluid in the

tunica as it invariably reaccumulated, and irritation seemed to increase the activity of the leprous process in the testicle. Very recently the patient, after improving had another attack of leprous fever, from which he was now recovering. This exacerbation consisted of an extensive outbreak of new tubercles similar to those which were visible when he first came under observation, and the organs in the scrotum had greatly increased in size.

**Folliculitis Decalvans.** Presented by DR. BLEIMAN.

The patient was a female, forty-four years of age, born in Austria. The disease began on the vertex six years ago, since which time it had been slowly but persistently progressive. When presented to the Society, the entire scalp was studded with small follicular abscesses with an occasional large lesion, filbert-nut in size, from which large quantities of pus could be forced. The patient was almost bald and considerable atrophy and scarring were present. Dr. Bleiman thought that the larger lesions were due to secondary infection.

**Lichen Planus.** Presented by DR. OULMANN.

The patient was a male, fifteen years of age. When presented, he exhibited an eruption of violaceous, flat, polygonal, shiny, pruritic papules which were scattered over the forearms, hands, legs and feet. The glans penis was also involved. The eruption had been present for two years. The most interesting feature of the case was the large number of lesions on the hands and feet.

**Onychogryphosis Congenita.** Presented by DR. GOTTHEIL.

Sadie X.; five years of age; from the City Hospital. No history was obtainable, except the child's uncertain statement that her nails had always been affected. All the nails of the fingers and toes presented the abnormal nail growth without any apparent inflammation of the nail-bed. The horny tissue grew obliquely up from the nail-bed in a dark-brown or yellow, coherent mass, forming in time, incurved nails which reached a length of an inch or more. In the larger nails of the great toes, thumbs, and forefingers they were a quarter of an inch thick, the lower layers being softer and more yellow, whilst the outer ones were brownish-black and ribbed. In the course of time, the speaker said, accidents usually happened to these abnormal nails; they were accidentally torn off, leaving an apparently normal, but somewhat irregular nail-bed on which a new nail-root would occur, and the appendage would be cast off by a suppurative process. The child's general health was excellent; her mentality was normal; and her general integument presented absolutely nothing unusual. The mucosa of the tongue and mouth, however, showed irregular

plaques of thickened, furred, white epithelium. These were always present, but would change in site and extent. They never became sore nor the cause of any complaint. None of the other visible mucosæ was affected. There were no stigmata of heredo-syphilis. Avulsion of the nails and the destruction by cauterization of the beds would seem to be the only therapeutic measure indicated; but as the patient would have to earn her living by manual labor it was a question whether her finger tips had not better be left protected, and reliance be placed on careful clipping and filing down of the abnormal nail masses.

**Pityriasis Rosea.** Presented by DR. OULMANN.

The patient was a male, twenty-three years of age. The man had first come under the speaker's observation three days ago. When presented to the Society, there were distinct papules on the flanks, while in the centre of the abdomen the lesions were confluent, forming a large patch. On the chest there were the typical lesions of pityriasis rosea—macules with scaly margins and cigarette-paper-like centres. Similar lesions, associated with scratch marks were noted on the back.

DR. MACKEE said that the lesions on the back were pretty well limited to the spinal column and that the only other parts of the body affected were the chest, abdomen and inguinal regions, or in other words, locations where the sebaceous glands were well developed. The patient also had a seborrhœa of the face and scalp. On the lower part of the abdomen the lesions were composed of scaly papules, some of which were arranged so as to form circinate patches. The large lesion in the centre of the abdomen was red, somewhat infiltrated and covered with waxy scales. The speaker said that although the lesions on the chest were very suggestive of pityriasis rosea, he was inclined to regard the case as one of seborrhœic dermatitis.

DR. PAROUNAGIAN said he agreed with Dr. MacKee about the confluent patch being an unusual form of seborrhœic eczema.

DR. WISE said that the diagnosis of pityriasis rosea could not be sustained, on account of the large, red, diffused patch on the abdomen. Such patches never occurred in pityriasis rosea. He considered the case as one of eczema seborrhœicum.

**Blastomycosis.** Presented by DR. OULMANN.

The patient was a male, occupied in a saw-mill and was forty-three years of age. The lesion first appeared three years ago as a small vesicle on the dorsal surface of the index finger of the right hand. This gradually evolved into a bluish, infiltrated patch, which involved the entire dorsal surface of the hand. On the index finger, where the lesion first developed, there was a tumor, walnut in size, of soft consistency and covered with a crust, under which pus exuded from a number of small abscesses. In a smear made from the discharge, double-contoured cells were found and the organism was grown in pure culture. Involution was already evident as a result of X-ray treatment.

**Syphilis of the Nose.** Presented by DR. WEISS.

F. H.; male; twenty-eight years of age; German by birth; twenty years in this country. The disease started eight months ago as an acute rhinitis, after which a small crusted lesion developed on the right ala. The lower half of the nose then became red, infiltrated and exhibited two small punched-out ulcers. Surrounding these lesions were several small nodules. The patient denied syphilis. The X-ray had been applied, but appeared to aggravate the condition. The case had been presented to the Dermatological Section of the Academy of Medicine in May, 1910, and there was a difference of opinion as to whether it was syphilis or lupus vulgaris. Following the advice of Dr. MacKee, vigorous anti-syphilitic treatment had been instituted, which was followed by immediate improvement. When presented to the Society, the condition, with the exception of the redness had disappeared and there were two scars which represented the sites of the previous ulcers.

The speaker said, that although there was a suggestion of the pearly edge of rodent ulcer in the periphery of the lesion, the appearance of the disease as a whole, induced him to make the diagnosis of tuberculo-serpiginous syphilide.

**Lepra Tuberosa.** Presented by DR. GOTTHEIL.

Lung Ying; twenty-six years of age; born in China; three years in the United States; from the City Hospital. Thirteen months ago nodules appeared on the left forearm; ten months ago similar lesions appeared on the thighs and glutei, together with small masses on the lobes of both ears.

The patient when first seen was in perfect health, with the exception of a considerable number of small tumors on the outer surface of his left thigh and buttock, and the outer surfaces of both forearms, and some very insignificant looking swellings of the lobes of both ears. The tumors were large-pinhead to large-pea sized, soft, purplish-brown, painless projections; and interspersed among them, in the entire region affected, were numerous, various-sized atrophic areas of the same dimension and shape as the tumors, and evidently the site of preëxistent lesions. The lesions were so exactly like those in a similar case presented to the Society last year that a diagnosis could be made at once. There was thickening of the ulnar nerve, but no atrophy of the muscles of the limb and no other skin lesions, anæsthetic areas, etc. The bacillus was readily demonstrable. During the time that the patient had been under observation many tumors had retrogressed, leaving atrophies, and new ones had appeared in the same regions. The nodulation of the ears had increased markedly and there were indications of supraciliary and supramaxillary tumors. There were no other symptoms, especially no attacks of leprous



fever. The general health was excellent; the patient had gained several pounds in weight. The treatment consisted in the administration of nastin.

**Sarcoma Cutis.** Presented by DR. GOTTHEIL.

F. R.; seventy years of age; an Italian. Three years ago small nodules appeared on the upper and outer side of the right foot, and two or three on the inner side. One year ago one of these latter was scratched, became infected, and was incised twice. All the lesions had grown steadily but slowly larger. Chronic inguinal adenopathy of the right side was present for many years. There was a history of a penile chancre thirty years ago.

Status præsens. On the dorsum of the right foot and its outer and inner borders, were ten projecting, hemispherical lesions, from one-quarter to three-quarters of an inch in diameter. They were painless, moderately hard, and there was no inflammatory base, nor was there any inflammation in the surrounding tissue; they looked fleshy, had a dark-pinkish tint, closely resembling the infantile form of bromoderma tuberosum. On the inner border of the dorsum of the foot, below and in front of the internal malleolus, was a half-dollar sized, circular ulceration, with a moderately hard margin and base, and dirty, irregular, slightly secreting surface. Scattered through the skin and subcutis of the sole and dorsum of the foot, as well as that of the lower leg, was a considerable number of minute to pea-sized tumors that were palpable only during the month that the patient had been in the City Hospital. There had been a slow but unmistakable increase in the size of the tumors and in the ulceration, in spite of an intensive arsenic treatment. Apparently it would not be long before the question of amputation would have to be considered.

**Case for Diagnosis.** Presented by DR. MACKEE.

The patient, a man forty-eight years of age, had been referred to Dr. MacKee by Dr. L. K. Neff. He was a care-taker in the New York Central Park Zoo and was in daily contact with the various animals. He stated that several of the animals had, at various times, been affected with cutaneous eruptions or affections of the hair. The condition for which the man sought relief had been present for eighteen months and in spite of various surgical procedures and applications it had gradually extended and grown worse. The disease developed as small pustules on the index finger of the left hand, just to the inner side of the nail. This gradually became a purulent paronychia. The affection then extended onto the dorsum of the finger, as far as the metacarpo-phalangeal articulation.

When the patient first came under the speaker's observation, three weeks ago, there was a vegetating lesion covering the entire dorsal aspect

of the finger, in which there were a number of minute fissures from which pus could be expelled by pressure. A single erythematous dose of the X-ray had been administered, since which time the lesion had become dry, hard, and the purulent secretion could no longer be expressed. The surface was now verrucous in appearance, strongly suggestive of tuberculosis verrucosa cutis. Smear preparations of pus were negative and cultures had yielded nothing but the staphylococcus.

DR. GOTTHEIL thought the case one of tuberculosis verrucosa cutis.

DR. MACKEE said that a diagnosis of tuberculosis verrucosa cutis had been considered but he was rather inclined to the belief that it was due to some vegetable parasite in spite of the fact that he had been unable to confirm the opinion microscopically.

**Pityriasis Rubra (Devergie).** Presented by DR. GOTTHEIL.

Bella L.; ten years of age. The eruption appeared when she was one year of age and had been present ever since. She had been treated by many dermatologists in various institutions for long periods without effect. Her general health was excellent, but her mentality was defective, the child being very backward for her years.

The eruption was more or less general, the roughness of the protruding follicle mouth being apparent to the touch even where the skin was apparently normal. It was most marked, however, on the arms, thighs, and face. On the limbs, the minute individual lesions were all distinctly follicular, there being minute, dark, horny, acuminate prominences around each individual follicle mouth. On the backs of the hands the lesions were not very marked; they were larger and rougher on the backs of the forearms and on the thighs; and in some places closely aggregated horny follicle mouths formed dark to lighter-brown, prominent, rough masses. On the face and the ears, the follicular nature of the process was less marked; the material was more sebaceous and less horny, forming irregular, greenish-yellow masses often arranged in streaks, and much more readily removable than the harder accumulations on the limbs. The resemblance of many of the lesions on the limbs to an ordinary lichen pilaris was striking, whilst on the face the accumulations resembled those of a dry seborrhœa.

REVIEW  
OF  
DERMATOLOGY AND SYPHILIS.  
Under the Charge of GEORGE M. MAC KEE, M.D.

A SPECIAL REVIEW ON SALVARSAN.

(Continued from page 53.)

By FAXTON E. GARDNER, M.D., New York.

In the six months that have elapsed since I gave THE JOURNAL a general review on Ehrlich's dioxydiamidoarsenobenzol, events have been moving fast, and while we cannot say to-day that we know all about the new remedy for syphilis, we may affirm without going beyond absolutely safe and sane limits that we know a good many facts of primordial importance in this respect.

Arsenobenzol or "606" was placed on the market some months ago, under the name of salvarsan which does not aim at any scientific significance. The use of salvarsan is, therefore, no longer restricted to a few men; any physician may administer it. This means a great benefit to the public, if the drug is properly given; it means a great danger, if it is employed by unscrupulous physicians who willfully foster in the lay mind the idea that it is a never failing "sure cure" eradicating the disease at one stroke, by a single injection, so that, after one injection, further treatment is unnecessary. For this idea, perhaps the chief guiding idea of Ehrlich in all his long and tedious work that culminated in the discovery of salvarsan, and certainly the mainstay of the conception of the *therapia sterilisans magna*, has proved to be but a cherished dream. The radical sterilization of syphilis is not effected by a single dose of salvarsan, once general dissemination of the spirochætae has taken place; it may be effected by salvarsan during that short period during which the spirochætae are still localized in the chancre and the immediate vicinity; but this constitutes an abortive treatment, already known and sometimes obtained before the occurrence of salvarsan, and not a *therapia sterilisans magna*, which means eradicating the disease at any stage of its course.

However, salvarsan has come to stay; despite all, it is the most powerful agent we have at our disposal against syphilitic manifestations. It is absolutely innocuous when properly handled; contraindications begin to be well known and are not particularly numerous. It acts quicker than mercury on a great majority of syphilitic lesions, and more powerfully; it acts on some tertiary lesions in which mercury and iodides have little effect, if any at all; it seems to modify the Wassermann reaction much

quicker and more durably than does mercury; it produces syphilitic antibodies in the blood, which mercury does not; it acts as a tonic for the body, while mercury is, and always was, a powerful poison to the anatomical elements. Therefore, if the advent of salvarsan has not erased mercury from the list of antisymphilitic therapeutic agents, it has relegated it to the secondary rôle of a complement for the routine chronic intermittent treatment. What place mercury will have in the future depends altogether on what we shall be able to obtain from salvarsan as regards a permanently negative Wassermann reaction. For the latter looms more and more as the best criterion by far to guide the treatment and to give at least strong presumptive evidence—not a certainty—of a cure. As in years not so long gone by, the therapeutic test was the last resort to decide whether a lesion of uncertain nature was syphilitic or not, Wassermann's reaction is now our last resort to decide whether in a clinically latent case, the disease may be considered as presumably extinct or simply silent for a while.

The literature on salvarsan has assumed such proportions of late that a complete bibliography would require too much space, and, besides, it is easily available in systematic form elsewhere; therefore, I shall be content with setting forth the conclusions now generally reached, and omitting the less important details.

In regard to the mode of injection, the last months have witnessed an unmistakable tendency toward the universal adoption of the intravenous method. The subcutaneous method has been entirely discarded on account of the pain it caused, the hard and slow disappearing indurations it engendered, the sloughs it not infrequently gave rise to, and finally, the slowness of absorption due to the walling-off of the injected solution by the proliferation of the irritated connective tissue. The intramuscular method has still its partisans; many—Fordyce for instance—claim that its results are not apparently inferior to those of intravenous injections. Of course, the method is open to the criticism of not being painless; despite improvements in the technique, we cannot pretend to more than give an occasional painless injection; we cannot assure positively before any injection that it will be so. There seems to be an element of personal sensitiveness on the part of the patient, maybe of personal skill on the part of the operator, and certainly there is an element of luck. Also, there have been reported quite a few cases in which the local reaction was marked, absorption was unsatisfactory, and even large areas of muscular tissue sloughed. All of these drawbacks are absent in intravenous injections which are absolutely painless; the technique is not difficult; there are absolutely no special dangers; the action is very rapid; the diffusion of salvarsan seems to be more thorough than with any mode of administration; indeed, Ravaut claims that the intravenous injection is the only mode after which arsenic has been found in the cerebro-spinal fluid; hence its particular efficiency in cases of syphilis of the nervous system. All of

these advantages would make the intravenous method the ideal and the only one, if there were not the slight disadvantage concerning the quickness of the elimination after this mode of injection. Meltzer states the case very tersely by saying that absorption after some intramuscular injections is insufficient, while elimination after intravenous injections is too rapid.

According to Greven, the elimination after an intravenous injection begins always within half an hour after the injection and is complete in three to five days, while, after intramuscular administration, it begins an hour after, and lasts from fifteen to eighteen days, even longer if there has been a previous mercurial treatment. These results were obtained with Gosio's so-called "biological" method, based upon the fact that cultures of *Penicillium brevicaulis* on a medium containing arsenic emit a very offensive smell. Jeanselme objects to the too great sensibility of the method and thinks Bougault's method more suitable for practical study, because we are not interested in the presence of small traces of arsenic in the urine, but in the time and rapidity of the elimination of the bulk of drug injected. He found that after intramuscular injections of suspensions of salvarsan, there was a marked "discharge" of arsenic, occurring between the third and sixth days. The elimination is already strong the day before the discharge; after the latter, only traces are found. After an intravenous injection, the bulk of the arsenic is eliminated within twenty-four hours, often even after twelve hours. Lafay remarks that the interval of elimination after an aqueous solution and an oily suspension is practically the same; this is important, as these suspensions represent the simplest mode of intramuscular injections, but are condemned by many authors as being relatively inactive and inefficient on account of the too slow absorption. Lafay's contention is borne out by the experience of some German workers.

The logical conclusion is that when an immediate and rapid action is desired, the intravenous injection is the best; when the subject must be kept for a certain time under the influence of salvarsan, oily suspensions are preferable. This association of an intravenous injection to begin with, followed after a few days by an intramuscular injection of insoluble suspensions seems to enjoy a great vogue now. Ehrlich comes out strongly for such a combination and a great many seem to follow his lead. Among those who do not combine the two modes, the intravenous injection is by far the favorite. Few resort to intramuscular injections alone.

The doses of 0.6 gm. for a man, and 0.45 gm. for a woman, have been universally accepted as the average. There are not so many discussions about dosage as formerly, as we know to a certainty that we do not have to worry about finding a dose that will be sufficient at once; we have learned that repetition of injections need not be feared, that, on the contrary, owing to the short duration of the action of one single injection,



repetition must be the rule. The fear entertained previously about successive injections was grounded chiefly on the theoretical view that spirochætæ might and would become arsenic-fast; neither actual experience in the living nor laboratory research, has substantiated this opinion: Margulies, working under Ehrlich's direction, tried vainly to obtain arsenic-fast spirochætæ. Repeated injections of salvarsan in the living subject have proved that the last is as efficient as the first.

Nor is the repetition of injections harmful to the patient. Jeanselme says that some patients showing intolerance for the first injection could stand later much stronger doses. However, Ravaut and Weissembach report a case in which four injections of salvarsan (two intramuscular and two intravenous given at intervals of about two or three weeks) determined a sensitization of the body sufficient to cause immediately after the fourth injection, phenomena resembling anaphylactic shock (giant urticaria, dyspnœa, etc.) without, however, any serious outcome. Such cases seem to be rare. Repeated injections are as a rule well tolerated.

Much work has been done to simplify the technique of intravenous injections: Schreiber's two-way syringe has been practically discarded, in this country at least, for gravity appliances which work very satisfactorily. It may be said that now an intravenous injection of salvarsan is little more complicated than a blood taking for a Wassermann test.

The solution is made by dissolving the salvarsan in 250 or 300 cc. of sterile saline solution (at about 104° F.) in a sterile graduate, stirring with a sterile glass rod until dissolution is complete: this gives a strongly acid solution which must be made alkaline. To effect this, a few drops of 5, 10 or 15 per cent. solution of caustic soda are added by means of a sterile dropper. The clear solution becomes at first turbid: a few more drops of the same soda solution are added, the precipitate redissolves and the salvarsan solution becomes clear again. If a drop is then placed on red litmus paper, it will be found that the solution is faintly alkaline. It is then ready for use. As an additional precaution against the presence of small particles of glass that might have fallen from the filed and broken neck of the vacuum salvarsan tube, the solution may be filtered through a sterile towel. The use of glass beads to shake with the salvarsan in order to accelerate dissolution has been found superfluous. Salvarsan dissolves readily and there is always danger of the beads splintering or breaking.

While the solution is being prepared, the region of the elbow of the patient (preferably the left to begin with) previously cleaned and dried, is made ready. The vein usually selected is the median basilic; a rubber catheter is tied tightly around the lower third of the arm so as to make the veins bulge. The needle is inserted into the vein and blood allowed to flow freely; then a connection is established between the needle and the salvarsan container by means of a rubber tube, provided with a glass index, and from which all air has been expelled. The tourniquet is now

removed and the solution is allowed to flow into the vein comparatively slowly, 8 to 10 minutes being the average for about 300 cc. of solution. Care is taken not to allow any bubbles of air to enter the vein, though one very small occasional bubble can do no great harm. When all the salvarsan has been injected, the needle is withdrawn quickly, a small dressing applied and the patient kept under medical supervision for twenty-four hours. Some physicians allow their patients to go home a few hours after the injection, which is given in the office, but it is probably better for the peace of mind of both the patient and the physician to have the former in a hospital for a day.

Such is the crude outline of an injection of salvarsan; it is the very simplest technique and it is sufficient for those who feel confident of always getting the needle into the lumen of the vein without much difficulty. Those who have a great experience and seldom miss the vein may find it satisfactory; but the average practitioner will do better by adopting a slight modification, which consists essentially in preceding and following immediately the injection of the solution of salvarsan proper, by an injection of a certain amount of normal saline solution. This is for the purpose of avoiding an unpleasant sequel not infrequently observed when some of the salvarsan solution has found its way into the subcutaneous connective tissue of the elbow, whether because the needle was only partly in the vein and partly in the tissue, or because the patient having moved his arm has punctured the venous wall on the point of the needle. Leakage of the salvarsan solution into the connective tissue is evidenced by a sharp, stinging pain immediately felt by the patient, by a stoppage of the outflow from the container and by the appearance of localized swelling in the region of the elbow. When such leakage takes place, withdraw immediately the needle, squeeze out the solution as thoroughly as possible from the connective tissue and reinsert the needle in another point higher up along the vein. This is considerably better than trying blindly to correct the position of the point of the needle without withdrawing it, which is generally unsuccessful and simply leads to more subcutaneous infiltration. Infiltration of salvarsan does the same as a subcutaneous injection, that is, gives rise to considerable painful induration, node formation, and sloughing of the tissues, the resulting ulcer being very slow to heal.

This inconvenience is safely warded off by the modification referred to previously: before injecting the salvarsan solution, pour into the container (generally a gravity apparatus) a small quantity (50 to 100 cc.) of saline solution, connect with the needle and watch if there is any infiltration. If there is some, it will remain harmless, because caused only by salt solution. If none, have the salvarsan solution, which has been kept in readiness, poured into the gravity apparatus. This is then allowed to flow, and when the container is nearly empty more saline is added. This in turn is allowed to pass into the vein to wash out the

needle and the vein: this will avoid possible inoculation of the subcutaneous tissue by the few drops of salvarsan solution that would remain in the needle if no salt solution were used. With this technique, infiltration need not be feared.

The successive pouring of salt solution, and salvarsan solution, and again salt solution, which cannot be avoided when one uses a single container gravity apparatus such as the Emery and Lacapère, or the Fox and Trimble, are done away with in the Boehm apparatus in which there are two containers, one for the salt solution and one for the salvarsan, a three-way stopper enabling the operator to change immediately the flow at will.

When no gravity apparatus is at hand, the salvarsan may be simply syphoned from the glass graduate, in which it was prepared, into the vein, but this precludes, of course, the use of saline prior to the injection of salvarsan itself.

The needle almost universally used is the bayonet needle with a plate for a thumb rest; this is the Schreiber needle of which there exist numerous modifications, according to the slant of the bevel or the calibre; it is good to have two needles of different calibre. The bore most generally used is No. 18. Lacking a bayonet needle, a straight needle may do, but is much less handy. It is very important that every operator should be familiar with his own needles. If the patient is fat, or if the vein fails to become prominent after a tourniquet has been applied, it is best to make a small incision under cocaine anæsthesia and to expose the vein. Ligating the distal end of the vein and incising the walls to introduce directly the needle is superfluous and has the disadvantage of putting the vein out of commission for the next injection, while after a simple puncture as above described, the same vein is not damaged at all and may serve for several injections.

In intravenous injections of salvarsan, the main point is to get into the vein and not elsewhere; whoever can do that with certainty need not worry much about details of technique.

At the last meeting of the American Association of Genito-Urinary Surgeons, Dr. Ruggles showed a very simple appliance intended to facilitate the introduction into the vein: a small block of wood provided with a groove on its under surface. The groove is applied directly over the bulging vein, whose position is thus plainly indicated.

Fox and Trimble claim that plain sterile distilled water is just as good as saline solution as a menstruum for intravenous injections of salvarsan. They have used it in numerous cases; if saline is used, it must be exactly isotonic, that is, in the definite proportion of 8.5 per cent., as for laboratory experiments. Distilled water is found everywhere, while isotonic sterile saline is not.

Oily suspensions for intramuscular injections are easily prepared by crushing the powder in a sterilized porcelain mortar with a sterilized pestle, in a small quantity (4 to 5 cc.) of iodipin oil.

*(To be continued.)*

## BOOK REVIEWS.

**The Treatment of Syphilis by the Ehrlich-Hata Remedy (Dioxydiamidoarsenobenzol).** A compilation of the published observations. By DR. JOHANNES BRESLER, Chief Physician to the Provincial Medical Establishment at Lübeck, Silesia. Second edition, much enlarged, translated by DR. M. D. EDER, with an abstract of the most recent papers. London and New York, *Rebman Company*. Cloth, 134 pp., \$1.00.

The title explains the nature and suggests the contents of this little book—a compilation of the published observations. The second edition summarizes faithfully the reports up to October 25, 1910. Such books save much time and trouble to those who do not accept the views obtained from some editorial article of their favorite medical journal, but want to have an accurate idea of the actual work that has been done, and perhaps have neither the time, knowledge of foreign languages or library facilities required for such an undertaking. Of course, when dealing with "606" we are on rapidly moving ground; things have changed since October 25, 1910, but the initial and fundamental work, which resulted in salvarsan being placed at the disposal of the profession at large is that related in Bresler's little book, which therefore ought to have a "keeping" value.

F. E. G.

**Salvarsan ("606"). Its Chemistry, Pharmacy and Therapeutics.** By W. HARRISON MARTINDALE, PH.D., Marburg, F. C. S., and W. WYNN WESTCOTT, M.B. London, D. P. H., H. M.'s Coroner for North-East London. New York, *P. B. Hoeber*, 1911, pp. 77.

This, also, is a resumé of the work done on "606" in 1910 (up to December 17th). Unlike Bresler's, it does not deal almost exclusively with the clinical aspect of the question, but goes more deeply into the chemistry, modes of administration, and the theory of chemotherapy in general. It gives, also, opinions of men of prominence in England and a very detailed bibliography. It is a little more technical reading than Bresler's.

F. E. G.

## NOTICES.

## BIOGRAPHICAL SKETCHES AND RESOLUTIONS OF RESPECT.

DR. SIGMUND LUSTGARTEN.\*

Resolved that we declare our high appreciation of the character and attainments of our lately deceased fellow member Dr. Sigmund Lustgarten; that we deeply regret the untimely end of a successful career to which individual research had already given world wide distinction and which gave promise to still greater fruition in the future; that in the deliberation of this Association, his extraordinary experience in dermatology, his ability as clinician and independent investigator, his clear and logical exposition in debate, we recognized as invaluable; that to those of us who knew him best, his grace of manner, his manifest cultivation, his refinement and his modesty rendered him most attractive as associate, companion and friend; and that it be so recorded in the minutes of the American Dermatological Association.

\* Resolutions of respect to the memory of Dr. Sigmund Lustgarten, adopted by the American Dermatological Association at its 35th Annual Meeting, Boston, Mass., May 25-27, 1911.



JAMES NEVINS HYDE, A.M., M.D.\*

The committee appointed by the President to prepare a biographical sketch of our late associate, Dr. Hyde, beg leave to present the following report:

\* This Association would to-day pay some fitting tribute to the memory of one of its most renowned and best loved members.

Dr. James Nevins Hyde died on the sixth of last September at Prout's Neck, Maine, his seaside summer home. He was born at Norwich, Conn., June 21, 1840. He fitted for college at Phillips Academy, Andover, Mass., and received the degrees of A.B. and A.M. from Yale College in 1861 and 1865, respectively. He began the study of medicine in 1861 with Dr. William H. Draper, one of the early members of this Association, but in 1862 he entered the military service of his country as Assistant Surgeon of Volunteers. In 1863 he held the same rank in the Navy, and gave valuable service in fighting yellow fever in Florida. In recognition of these services he was selected by President Lincoln to accompany Admiral Farragut on his voyage to European waters. So modest was the man that probably very few of us ever heard him mention this interesting and patriotic era in his life. In 1868, he resigned from the Navy and resumed his medical studies, and received the degree of M.D. from the University of Pennsylvania in 1869.

Thenceforth he continued in the practice of dermatology in Chicago until his death. In 1876, he was appointed Professor of Dermatology in the North Western University, and in 1879, to a similar professorship in Rush Medical College. In 1901, he became also Professorial Lecturer in the University of Chicago. He was dermatologist to the Presbyterian and other hospitals.

Thus he passed forty years, devoted with utmost zeal and enthusiasm to the study and practice of his specialty. He was also a successful teacher and untiring writer. He published the first edition of his world-known work on skin diseases, a book of 512 pages, in 1883, and the eighth and last, of 1,126 pages, in 1909. You all know the character of this work, how thoroughly it covers the whole field of dermatological literature and research, what individuality and independence of opinion it expressed, how discriminating and reliable its advice with regard to treatment; a highly satisfactory guide for practitioner and advanced student. It must long remain a chief authority for reference, a great monument to his ability and industry.

In 1896, he also published, in connection with our late colleague, Dr. F. H. Montgomery, a large manual of syphilis and venereal diseases. His occasional and highly valued articles on dermatological subjects number a hundred or more. In addition to this vast amount of professional labor he was an active member of his church, and engaged in other literary and philanthropic work.

Dr. Hyde assisted in the foundation of this Association in 1876. Of the charter members, twenty-nine in number, but six remain upon our active list. From then until his death he served the Association with constant zeal and fidelity, giving the best that was in him to its interests, as President, chairman of many important committees, never-failing attendant at meetings, contributor of many important papers, and an animated debator. His enthusiasm was an inspiration to all of us.

His cheerful personality, his ready sympathy and never failing respect for his colleagues made his friendship to be highly desired by all of us. An irreparable loss has occurred to the Association.

To his family we offer our deep and sincere sympathy.

JAMES CLARK WHITE.

OLIVER S. ORMSBY.

LOUIS A. DETHRING.

*Committee.*

\* Biographical Sketch read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 25-27, 1911.



## HOFRATH PROFESSOR FILIPP JOSEF PICK.\*

On June 3, 1910, Hofrath Professor Dr. F. J. PICK, the oldest German pupil of Hebra, died suddenly at Prague in the full possession of his mental vigor at the age of seventy-six.

Filipp Josef Pick was born in Neustadt, Bohemia, in 1834. In the early fifties he studied medicine in Vienna under Hyrtl and Rokitansky and served later as Secundär Arzt under Skoda, Siegmund and Hebra—an incomparable education.

As a young physician Pick devoted himself to purely scientific studies and did much to increase our knowledge of protozoa, amœbæ and the vegetable fungi of the skin. He was the first to demonstrate the identity of *tinea favosa* in mouse and man and to describe *trichomycosis palmellina*. In 1865, he tried to convince Hebra of the parasitic nature of *eczema marginatum*; a few years later he endeavored to point out to Kaposi the non-identity of *pityriasis rosea* and *herpes tonsurans*; and again he sought to prove to Hebra's successor the tuberculous nature of *lupus vulgaris*; but the Vienna masters turned a deaf ear to these now accepted discoveries.

In 1866, Pick returned to Prague, where, according to a contemporary, syphilis existed but no skin diseases. Pick interested himself at once in syphilis and with others demonstrated the contagiousness of its secondary lesions, contrary to the teaching of Ricord. In 1868, he became a teacher of syphilis and dermatology at the Garrison Hospital. In 1873, he was named "Extraordinary" Professor at the University of Prague and in 1896, he received the great honor of being appointed the first "Ordinary" Professor of Dermatology in Austria. Finally, in 1905, he became a Royal and Imperial Hofrath.

In 1869, Pick founded with Auspitz, the *vierteljahresschrift*, which became, in 1886, the present *Archiv für Dermatologie und Syphilis*—the official organ of the Vienna school of dermatology. In 1889, Pick and Neisser founded the German Dermatological Society and Pick became and remained its president.

During these active years Pick continued his original and important contributions to dermatology and greatly increased our knowledge of *molluscum contagiosum*, *melanosis lenticularis progressiva* (1884), *urticaria pigmentosa*, *erythromelic* and *acne frontalis* (1889). In therapeutics he was also a leader. He introduced iodoform into dermatology and the *emplastrum saponatum salicylicum* into the treatment of *eczema*; he devised the medicated gelatines and advocated the drying liniments. Professor Pick's first lieutenant, Dr. Wälsch, thus describes his chief: "Pick was an indefatigable worker—the out-patient clinic, the house patients, the instruction of students, the laboratory and the editing of the *Archiv* were his life. He studied personally every hospital patient and he knew them all. He had a wonderful talent for teaching—his gift of speech was unusual, his clearness of style remarkable, his clinical acumen most marked, his learning deep, and his logic most keen. He was a disciplinarian and expected hard work of his colleagues and pupils, but to all his students he offered kind words, good advice and an open hand; to his staff he was teacher, friend and an inspiration."

Two members of this committee have had the pleasure of knowing Professor Pick. One of them states that it was his good fortune to visit the Prague clinic in 1896 and the impression he received of Pick's character and professional attainments during his profitable fortnight's visit made a lasting impression. The other writes that it was his good fortune to visit Professor Pick shortly before his seventieth birthday. At that time he was spoken of on the continent

\* Biographical Sketch read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 25-27, 1911.

as the "Father of Dermatology," and so he seemed. Pick's dermatological department made a great impression and seemed one of the best teaching centres in Europe. Pick was very active and maintained with unusual ability the high standard of hospital organization that he had created. This keen interest in his patients was remarkable. Aside from his scientific attainments, his kindness and courtesy as a host make his memory a pleasure to recall.

From these alien impressions it can be seen that Wälsch's estimate of his master cannot be an exaggeration.

Professor Pick was elected an honorary member of the American Dermatological Association in 1888 and we pause to-day, in our busy routine, to record our sense of deep personal loss in the death of this renowned and admired colleague.

CHARLES JAMES WHITE.

MARTIN FEENEY ENGMAN.

WILLIAM THOMAS CORLETT.

*Committee.*

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### APPOINTMENTS.

Dr. Abner Post, of Boston, Mass., has been appointed Professor of Syphilis and Dr. Charles J. White, of Boston, Mass., has been appointed Assistant Professor of Dermatology in the Medical School of Harvard University. . . .

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### ERRATUM.

In the article which appeared in the July issue of THE JOURNAL, by George Henry Fox, M.D., and Udo J. Wile, M.D., entitled "Sarcoid Tumors of the Skin with Report of a Case of the Boeck Type," the captions under Figs. 2 and 3 should be transposed.

## BOOKS AND REPRINTS RECEIVED.

*Books marked with an asterisk will be reviewed.*

## BOOKS.

- \*Beiträge zur Pathologie und Therapie der Syphilis. DR. ALBERT NEISSER. 1911. *Julius Springer*, Berlin.
- \*La Syphilis Expérimentale. DR. ALFRED LÉVY-BING et DR. PAUL LAFFONT. 1911. *Octave Doin et Fils*, Paris.
- \*Praktische Ergebnisse auf dem Gebiete der Haut-und Geschlechtskrankheiten. DR. A. JESONEK. 1910. *J. F. Bergmann*, Wiesbaden.
- \*A Working Manual of High Frequency Currents. DR. NOBLE M. EBERHART. 1911. *New Medicine Publishing Co.*, Chicago.
- \*Diseases of the Skin. DR. JAMES H. SEQUEIRA. 1911. *P. Blakeston's Son & Co.*

## REPRINTS.

- Pellagra in Buffalo. GROVER W. WENDE, M.D. *Med. Jour.*, Buffalo, May, 1911.
- Skin Diseases and Cosmetics. GEORGE PERNET, M.D. *Brit. Med. Jour.*, May 27, 1911.
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FIG. 2. Case 2.  
Dermatitis Vegetans.



FIG. 1. Case 1.  
Dermatitis Vegetans.





Fig. 4. Case 4.  
Dermatitis Vegetans.



Fig. 3. Case 3.  
Dermatitis Vegetans



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## DERMATITIS VEGETANS IN INFANTS.\*

By GROVER W. WENDE, M.D., and HERMAN K. DE GROAT, M.D.,  
Buffalo, N. Y.

WE desire to bring to your notice a somewhat uncommon vegetating lesion met with in infants. Our attention was attracted to it almost twenty years ago; in 1904, we reported two cases of this condition and the object of this paper is to present four additional cases. Complete observations in these patients will not be presented here, but rather a demonstration of the remarkable similarity in all of them. After one case has been studied, there will be little difficulty in again recognizing the eruption.

Perrin,<sup>1</sup> under the name of "*Dermite végétante en placards chez les nourrissons seborrhéiques*," has described an affection occurring in nurslings. Lesions were situated on the forehead, cheeks and chin, wrists, thighs and legs. The primary efflorescence consisted of a papule with a tendency to become pustular at the summit. The union of several of these pustulo-papules formed a secondary lesion, characteristic of papillomatous vegetations. It was clearly limited, more or less circular in form, elevated above the surface and not painful to palpation. In plaques over fifteen days old the centre was covered by a crust, and at the periphery new pustules were present. The vegetations varied in size from a half dime to a twenty-five-cent piece. Under treatment they disappeared, leaving pigmented areas. In no case did scars result. The duration of individual lesions under treatment with mild antiseptics varied from two to three weeks. Perrin's observations were made upon infants two and one-half, four and one-half and seven months old. The mothers were healthy. The babes were nursed by the mothers, were fat, vigorous, and in perfect health when examined except for the seborrhœal eczema and the peculiar lesions under discussion. No medicines had been taken

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by either mothers or infants which might have produced a disease similar in appearance.

The second published paper was that of Wende and De Groat.<sup>2</sup> Two cases of vegetating dermatitis developing during the course of infantile eczema were described with their pathology and a review of the literature, including Perrin's cases occurring in infants, and a short summary of anomalous adult cases reported by Hallopeau and by Hartzell. These two cases were infants of six and eight months with seborrhœic eczema, whose vegetating lesions dated from a few weeks after birth. The children and mothers were healthy; there was no history of medication; the eczema preceded the disease. The essential primary lesions were pustulo-papules with reddened bases. The pustules readily ruptured and discharged their contents; in some the pustule disappeared, while the base increased in size and assumed a vegetating appearance. The vegetating masses arose either from the base of a single lesion, or by the coalescence of multiple lesions. The largest reached an inch in height.

Corlett<sup>3</sup> reported, in 1906, a case seen by him in February, 1887, in a boy seven months old. The disease began at the age of three months, in the form of large papules which merged into mushroom-like plaques from lentil to silver-dollar size, elevated above the skin one-quarter inch, with overhanging margin. There were a few pin-head collections of pus and pus oozed from fissures in the growth; there was little or no itching; the lesions were not symmetrical. The condition cleared up in about a year from the start under treatment with unguentum hydrargyrum ammoniatum with resulting scars, which could be seen twenty years later on the cheeks, temples, forearms, trunk, and legs. The scars were of oval or irregular outline and became more conspicuous when the patient was cold.

The following four cases which have been under the observation of the writers belong clearly in this classification:

CASE 1. A baby four months old was seen at the Buffalo Orphan Asylum, in August, 1903; the general condition was good; it was fed on cow's milk from birth; no drugs had been given. It suffered from eczema of the cheeks, characterized by scaly areas which did not change much until two weeks before coming under observation, when about twenty pustulo-papules suddenly appeared, irregularly distributed on both cheeks, as shown in the photograph (Fig. 1), presenting the appearance of vaccinia. These quickly changed to vegetating lesions which varied in size from a split pea to a hickory nut. A number were multilocular pustules set on an inflamed base. The summits were covered with crusts or scales. They were isolated and without clustering. The treatment prescribed was bathing with warm boracic acid lotion followed by a 15 per cent. ammoniated mercury ointment. The condition entirely cleared up in three weeks.

CASE 2. A female child ten months old. The infant presented a robust appearance and had had no previous illness. She had been breast fed from birth. Neither child nor mother had received bromides, iodides, or other medication. From the history given by the mother the lesions appeared as "pimples," which soon ruptured, dried, and rapidly grew into the masses seen on first examination. The lesions attained an unusual size, and were situated upon the face, scalp, neck and back of right wrist. The largest one was located on the right cheek (Fig. 2), was roughly circular in outline, measured three inches in its longest diameter and one inch in height. It was firm, dirty red in color, obtuse at the edges and flat at the summit, which was capped with thick, white, epidermic scales, its general appearance being distinctly "warty." The scales could be removed only with considerable difficulty and, after removal, the lesion presented a characteristic vegetating appearance, the nodule being dotted over with minute, deep-seated, follicular pustules. Five smaller lesions on the same side—one at the juncture of the hair and the temple, three above and one just below the large lesion, varying in size from a bean to a hickory nut—presented the same characteristic appearance. A condylomaform lesion about the size of a walnut was present on the left cheek. Similar nodules arranged in crescentic fashion were found behind the angle of the jaw, and on the wrist were two lesions the size of a hickory nut. A 20 per cent. ointment of mercury was used in this case with disappearance of the lesions in six weeks, leaving slightly pigmented and reddened surfaces.

CASE 3. A healthy baby of six months, with no history of previous illness of any kind. The mother was very strong and had not taken medicine or given any to the baby. The disease began on the left cheek as a pustule, from the mother's description. Other pustules later appeared irregularly over the face and all soon changed their form into the condition to be described.

When the patient was first seen, as shown in the photograph (Fig. 3), there were distributed over the face ten vegetating plaques of a violaceous-red tint, covered with scales, varying in size from a pea to a walnut, most of them circular, some irregular in outline and formed by the coalescence of multiple lesions. The surface was rough and warty, covered with miliary pustules. None of the initial pustulo-papules was present. The vegetations responded favorably to antiseptic treatment within five weeks.

CASE 4. A baby, aged six months. The mother, twenty years of age, was strong and healthy, nursed the baby, and had taken no medicine. She knew of no skin affection in her family resembling that of her baby. She gave the following history of her child. It had always been healthy and strong and had never been given medicine. When the infant was two months old the disease began upon the left cheek as a pustule which in five days reached the size of a bean. Vaseline was applied and the pustule apparently disappeared. A few days later a number of new lesions appeared near the site of the previous one and coalesced into a single large tumor, which gradually increased in size and height. This condition continued about three months when new lesions developed in the same order upon the right cheek, forehead and left cheek. A little later, two days before the photograph (Fig. 4) was taken, May 12, 1906, there was a sudden outbreak of pustules over the entire head.

EXAMINATION, May 16th. At that time five large elevated patches were present on the face. The largest, roughly triangular in shape, measured about two inches in its longest diameter. The surface was elevated a half inch above the level of the skin. The lesion was dull red and covered with crusts which filled the cribiform depressions. It was firm to the touch and very sensitive. The other four old lesions were irregular or oval in shape, varying in diameter from a quarter of an inch to an inch and were raised about a quarter of an inch above the surface. There were thirty-five pustules nearly uniform in size, irregu-

larly scattered over the face and scalp. Those upon the forehead were globular and surrounded by an intense reddish areola and resembled the lesions of variola during the stage of suppuration.

The treatment employed consisted simply in clearing the surface with peroxide of hydrogen followed by the application of a 10 per cent. ammoniated mercury ointment. The large fungoid masses in the course of a few days began to shrivel and disappear. No new pustules formed and within a period of four weeks the entire process had ceased.

**MICROSCOPICAL EXAMINATION.** Sections were prepared from two lesions. All the sections showed epidermic hyperplasia chiefly in the papilliform projections, branching down-growths varying greatly in size and shape; œdema; mitotic figures of the prickle-cell layer, unusual in number. There was grouping of leucocytes and eosinophiles between the rete cells, like vesicle formation, and extending to the surface. The granular layer in portions showed a tendency toward hyperkeratosis, in others was completely denuded and covered with a crust. The pegs of epidermis varying greatly in thickness dipped down deeply into the corium. The papillary and subpapillary layers showed an infiltration of polymorphonuclear leucocytes and lymphocytes; eosinophiles, mast cells and plasma cells were present in unusual numbers. The blood and lymph vessels were enlarged, often occluded, and the walls of the blood vessels showed active proliferation. A careful examination of numerous sections in search of special organisms proved negative except for a staphylococcus pyogenes aureus in the epidermis. Cultures on agar showed characteristic colonies of the same organism. Inoculation of guinea-pigs with pieces of the tissue proved negative. The blood examination of the patient showed two per cent. eosinophiles and was otherwise normal.

**SUMMARY.**—The ten cases here assembled all occurred in healthy infants under one year of age, and are sufficiently characterized to be described together. Six developed in the course of eczema and four independently of any other dermatosis. In six patients the lesions were limited to the face with the exception of a few scattered lesions on the scalp; in the other four, the wrists, arms and legs were involved. The initial lesion was a papulo-pustule. The pustule soon dried up or ruptured and discharged its contents, and upon the reddened base there developed the characteristic secondary lesion of the disease. This consisted of vegetating masses varying from split-pea to walnut size or larger, and elevated from one-quarter to one inch above the skin surface. Some of these lesions developed from the base of a single pustule, others by the coalescence of several. The individual lesions often contained miliary pustules, especially near their borders, exuded a purulent fluid on pressure, and when the crusts or scales covering them were removed presented a warty appearance. There was no constitutional reaction and disturbance of sensation was apparently very slight.

A gratifying feature was the benign course of the disease, all cases yielding to antiseptic treatment in from two to eight weeks. With the exception of Corlett's case, there was no scar formation, the

site of the former lesion being indicated, at the most, by a brownish discoloration. In Corlett's case the resulting scar formation may have been due to the prolonged course of the disease, about a year, while all the other cases were cured in a much shorter time. The vegetations seemed to be like those in our cases, although his case began with a papule, and ours and Perrin's with pustulo-papules.

The mode of onset with initial pustulo-papules, development characterized by vegetating lesions, benign history and favorable response to treatment make possible the differentiation of this affection from all other dermatoses complicated by vegetations except those due to bromine or other drugs. In each of our cases special attention was given to the question of previous medication and this possibility could be definitely excluded.

In the bacteriological examination of the lesions in three of our cases we succeeded in finding only staphylococci. That vegetations may develop in the course of many different skin affections and that staphylococci and other common pyogenic bacteria may be found therein are well recognized facts, but the relation of the special organisms to such lesion, whether causal or merely casual, is not proved. The several factors which might determine the local effects of the growth of such contaminating organisms cannot be controlled or properly estimated. We are left only to speculate in this complex problem. Yet that special causes or at least causal factors may be operative in certain case-groups is made probable by the more or less definite clinical picture of each group. In the special group of cases presented in this paper such a view seems most reasonable. The clinical picture is striking and well defined. But what special cause or causal factors are operative in this group we have not been able to determine. The chief evidence bearing on this question is found in the occurrence of staphylococci in the lesions and the response of the disease to antiseptic treatment. The age of the patients, all of them infants, is also suggestive of a special influence in determining the type of local reaction. Further, the strong resemblance of the lesions to the hypertrophic vegetations occasionally found in chronic bromism might suggest that in each a common ætiological agent was at work, *e.g.*, secondary infection by the common pyogenic cocci.

It is interesting to compare with the special group of cases of dermatitis vegetans in infants, as here described, a similar condition in adults, described by several observers.

Hallopeau,<sup>4</sup> in 1898, was the first to describe such a case in an



adult under the designation, "pyodermite végétante," believing that the vegetating lesions were dependent upon local infection spread by autoinoculation. The initial lesions consisted of vesico-pustules on an inflamed base, located in the region of the genitals, hands and mouth, or sometimes on the scalp, neck and limbs. The lesions appeared in successive groups, which coalesced into areas covered with crusts beneath which formed elevated vegetations. The general health of the adult patients was unaffected and the disease responded to local antiseptic treatment. Hallopeau at first maintained the individuality of the disease and denied its relation to pemphigus vegetans or dermatitis herpetiformis, but subsequently receded from this position and placed the affection as a variety of pemphigus vegetans.

Hartzell,<sup>5</sup> in 1901, under the title of dermatitis vegetans, reported a case in an adult that corresponded with Hallopeau's case and expressed the view that the affection is much more closely allied to dermatitis herpetiformis than to pemphigus.

In 1902, Jamieson<sup>6</sup> described a case in a child eight years of age. In the chronicity and the more general distribution of the lesions, involving the genitals and nails, the case conforms more to the adult than the infantile type. The child was much older than those considered in our group and the course of the disease was of much longer duration. Jamieson strongly maintained the individuality of the affection.

Subsequently, Pusey<sup>7</sup> reported two cases of vegetating dermatitis corresponding to the type described by Hallopeau, Hartzell and Jamieson. The vegetations developed upon an eczematous base apparently from infection, although Pusey did not insist upon the infection as essential. He further considers the probability of a common causal factor in all these reported vegetating lesions, occurring in infants, adults, and in granuloma pyogenicum.

Fordyce and Gottheil<sup>8</sup> reported a case and raised the question whether it represented a disease entity or was merely a variety of pemphigus vegetans, or a complication of dermatitis herpetiformis.

In the several cases in adults the vegetations followed a distinct type distinguishable from those occurring in the infant cases, which were equally distinctive for this group.

In conclusion we would therefore emphasize the occurrence in infancy of a clinically well-defined and characteristic group of cases of dermatitis vegetans.



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## DISCUSSION.

DR. ANTHONY said he had observed a number of these cases; two of them, he thought were metastatic. A child, two years old, was admitted to the hospital with meningitis. The fluid obtained by spinal puncture yielded a streptococcus culture and no other microörganism. About 48 hours after the spinal puncture, an eruption appeared on the face and arms. It quickly presented the typical appearance of dermatitis vegetans and the same microörganism was obtained by culture from the skin lesions.

The second case was in a child about one year old where a severe attack of influenza affecting the respiratory tract was followed by an acute inflammation of the left hip joint. While the joint inflammation was at its height an eruption of this character appeared on the thighs. Both eruption and hip joint inflammation disappeared simultaneously two days after the case was observed.

DR. HARTZELL said he had always felt that there was a good deal of doubt about the propriety of regarding the so-called vegetating dermatitis as a distinct disease. It was probably due to a pyogenic organism, and he did not think we should try to establish it as a distinct pathological entity. The reason why this organism produced these vegetating lesions would probably be found in some particular susceptibility of the patient. They were probably nothing more than pyogenic lesions resulting from pus infection in a susceptible individual.

DR. RAVOGLI asked whether there was any difference between this form of dermatitis vegetans and the dermatitis papillaris described by Kaposi? He was of the opinion that in order to have vegetating proliferations, a permanent irritation ought to be present, as it was in tuberculous, or syphilitic vegetating forms. Some vegetations might be due to the presence of other bacteria, and indeed the presence of the pus cocci in the hair follicles was the cause of the dermatitis papillaris capillitii.

DR. WENDE, in reply to Dr. Ravogli's questions said that he believed that dermatitis vegetans was in no way related to dermatitis papillaris capillitii, and was an entirely different affection.

A DIFFERENTIAL STUDY OF MULTIPLE BENIGN  
CYSTIC EPITHELIOMA AND ADENOMA SEBACEUM  
IN THE NEGRO.

By RICHARD L. SUTTON, M.D., Kansas City.

THE clinical and pathological resemblances existing between the three principal multiple, non-malignant, cutaneous new growths, benign cystic epithelioma, adenoma sebaceum, and lymphangioma tuberosum multiplex, has long been a subject of contention in the dermatological world.

Pick (*Arch. f. Dermat. u. Syph.*, lviii, p. 201) has suggested that the first two are but different clinical expressions of the same pathological process, but, while the resemblance in a border-line example of each may be quite striking, the microscopic changes observed in representative cases of the two disorders are so dissimilar that his position is hardly tenable.

According to Unna (*Histopathology of the Diseases of the Skin*, Walker's translation, McMillan and Co., New York, 1896, p. 1124), Balzer and Ménétrier (*Arch. f. Physiol.*, 1885, p. 565), were the first ones to study the minute anatomy of multiple benign cystic epithelioma, although they failed to recognize the true nature of the tumor, and considered it a neoplasm of the sebaceous glands. Their patient was a woman, twenty-one years of age, whose mother had suffered from a similar affection. The growths appeared at puberty, as small, pinhead to pea-sized nodules on the forehead, and later on the face, scalp, neck, and ears. Microscopically, they consisted of epithelial masses scattered through the connective tissue of the cutis, and containing cysts in their interior. These cysts were very numerous, sometimes thirty or more in one section, and while the authors considered the enclosed material as a transformation "*en éléments sébacés*," Unna has pointed out that it was composed mainly of hyalin and colloid fragments. All of the epithelial nests were sheathed in capsules of connective tissue, and the greater number of them contained no fat whatever, but only flattened horny lamellæ.

Brooke (*Brit. Jour. Dermat.*, 1892, p. 269) and Fordyce (*Jour. Cutan. Dis.*, 1892, p. 459), working independently, were the next to thoroughly investigate the histology of the lesions (both Török's and Darier and Jacquet's (*Monatsh. f. prakt. Dermat.*, viii, p. 116; *Ann. de dermat. et de syph.*, 1887, p. 317) cases were undoubtedly examples of lymphangioma tuberosum multiplex).

Brooke's conclusions were based on a study of four cases of the disease (two histologically), three of the patients being members of the same family. He traced the origin of the growths from the epidermal epithelium (rete Malpighii and hair follicles).

Fordyce's two cases were seen in a mother and her daughter. The lesions first appeared on the mother when she was fifteen years old, and on the daughter at the age of thirteen. In both instances the growths were translucent and pearly looking, and varied in size from a pinhead to a split pea. In both patients the face, neck, and chest were attacked. The larger growths were covered with small capillaries, and intermingling with the lesions, telangiectases and black pigment spots were found. Sections from the first tumors examined failed to show any connection between a new growth, which was present in the cutis, and the epidermal or glandular appendages. When other tumors, in which a central depression was macroscopically visible, were studied, however, there was found a direct down-growth and proliferation of the epidermis and also of the external root sheath of the hair follicle. The proliferated basal layer of the epidermis could be seen forming the peripherally situated cells of the masses and retaining the same palisade arrangement of the cells as in normal epidermis. The resulting cell heaps in many sections approached the hair follicle so closely that the hair was deflected from its normal course. Numerous sebaceous glands were observed throughout the sections, but in every respect these were normal and independent of the cell masses resulting from cell proliferation. Unchanged coil glands and ducts were found in some of the specimens, but in lesser number than normal.

J. C. White's (*Jour. Cutan. Dis.*, 1894, p. 477) patient was a woman, forty-five years of age, and the disease had been present twenty-one years. The lesions, which varied in size from the head of a large pin to a quarter dollar, were distributed over the face, neck, shoulders, and forearms. Some of the tumors had undergone further changes, and become malignant. Histologically, Bowen found compact masses of epithelial cells in the corium, somewhat resembling the ducts of the coil glands. On close examination, however, it was found that these islands and strands of epithelial cells were connected and intermingled in a very complicated manner, and small cysts, containing a granular or homogeneous substance, with one or two large, deeply staining cells, were frequently seen. A few of the cysts contained a corneous material instead of, or together with, the colloid substance. In all of the tumors a connection of the epithelial

masses and tracts with the lower cells of the rete could be demonstrated.

In Jarisch's (*Arch. f. Dermat. u. Syph.*, 1894, p. 164) case, also, there were evidences of malignancy, the process starting in the outer layers of the hair follicles, and this writer suggested for the condition the name *tricoepithelioma papillosum multiplex*.

Stelwagon's (*Diseases of the Skin*, W. B. Saunders Co., Philadelphia, 1910, p. 634) case, which is the third one of multiple benign cystic epithelioma in which cancerous tendencies have been noted, was in an adult male, and the lesions were distributed over the face and forehead. Some of the larger growths showed signs of malignancy similar to those observed in rodent ulcer. In fact, Adamson (*Lancet*, October 17, 1908) is inclined to the belief that these three instances are closer to the rare examples of multiple rodent ulcer than to the Brooke-Fordyce type of multiple benign cystic epithelioma.

Within the past ten years, Wolters (*Arch. f. Dermat. u. Syph.*, 1901, pp. 89 and 197), W. Pick (*Ibid.*, 1901, p. 201), Hartzell (*Am. Jour. Med. Sc.*, September, 1902; *Brit. Jour. Dermat.*, 1904, p. 361), Csillag (*Arch. f. Dermat. u. Syph.*, 1906, p. 163), Kreibich (*Ibid.*, 1904, p. 3), C. J. White (*Jour. Cutan. Dis.*, 1907, p. 50), Pusey (*Principles and Practice of Dermatology*, D. Appleton and Co., New York, 1907, p. 863), Heidingsfeld (*Jour. Cutan. Dis.*, 1908, p. 18), and others, have reported cases or discussed the pathology of the affection.

Wolter's patient was a woman, twenty years of age, with a solitary lesion, which had been present since birth, on the right eyebrow. The corium contained large numbers of rows of epithelial cells, from one to four deep, presenting here and there dilations in their course. When traced out, it was found that these cellular structures were connected either directly or indirectly with the hair follicles or glands. The dilatations consisted of concentric rings of these epidermal cells, the centres of which had either undergone colloidal degeneration or still contained a horny pearl of cornified epidermis. In Wolters' opinion, the character and formation of the structures produced conclusive evidence of their epithelial origin.

Pick's case occurred in a man, forty-three years of age, and the disease had been present since the patient was about eight years old. The growths were on the malar regions and the forehead. There was some dilatation of the superficial capillaries, as in Fordyce's case. The principal histologic changes were to be observed at



the periphery of the sebaceous follicles, and consisted of marked proliferation of the epithelium, with tumor formation.

Hartzell's first two patients were both females, one aged eighty, and the other thirty-eight years of age. The older woman presented a rounded patch of small, firm, translucent, bluish-white nodules, many of which were confluent, on the right side of the forehead. Near the centre of the patch was a small ulcer. The growth had been present six or seven years. The second patient had a half-dozen dime to half-dollar sized oval and irregularly shaped patches in the subclavicular and scapular regions. The lesions consisted of a bead-like border of pinhead to split-pea-sized papules, surrounding an area of cicatrized and atrophied skin. Histologically, both cases closely resembled those previously described by Brooke and by Fordyce. In Hartzell's second communication, which is based upon the study of a third case of the disease, he concludes that Darier and Jacquet, Török, Unna, and Neumann (*Arch. f. Dermat. u. Syph.*, 1900, p. 3) were in the wrong in concluding that lymphangioma tuberosum multiplex arises from the excretory ducts of the sweat glands, and expresses the belief that the neoplasm is simply a variety of multiple benign cystic epithelioma. Hartzell's third patient was a girl, fourteen years of age, and the solitary lesion present, which was a small, firm, button-like, yellowish-pink tumor on the chin, had first been noticed four years prior to the time of consultation. Microscopically, there were numerous slender tracts of cylindrical epithelial cells, usually two or three cells wide, running in all directions through a fibrous stroma, and many round and oval cysts with epithelial walls, filled with hyaline material which showed a more or less laminated arrangement. No connection with any part of the sweat gland apparatus could be demonstrated. Frequently, long, slender, epithelial branches could be seen extending from a hair follicle, more often from its upper third, and in a few instances the lower extremity of the follicle presented numerous budding processes. Many of the follicles contained cystic cavities in various stages of development, in most of which the hairs were still present. In other words, the neoplasm was identical in structure with those described as syringocystoma (Török and Philippson, *Monatsh. f. prakt. Dermat.*, xi, p. 1), hydroadenoma (Darier and Jacquet), and hæmangioendothelioma (Jarisch, *Arch. f. Dermat. u. Syph.*, xxviii, p. 164), while apparently the evidence was equally clear that it was an epithelial growth springing from the hair follicles, and in no way connected with the coil glands or ducts, or the blood vessels.



Csillag's two cases were seen in a mother and her daughter, and the regions affected were the scalp, and various parts of the face. Histologically, there were solid processes of epithelial cells, growing from the surface epidermis or from the prickle layer of the hair follicle, surrounded by a regular basal layer which was continuous with that of the structure from which the growth originated. Some of the processes were club shaped, while others were almost circumscribed masses, with cyst-like formations in the central portion.

Kreibich's case, which was seen in a woman twenty-three years of age, was probably an anomalous type of this disease, although he preferred to call it *adenoma folliculare cutis papilliformum*. The growths were seated on the back of the neck, on the right shoulder and suprascapular region, and over the spinal column in the interscapular space. Microscopically, the neoplasms contained numerous cysts, which were frequently, but not always, connected with the pilo-sebaceous apparatus. There were some cell masses which were grouped like those seen in the coil glands, but none of the cysts was connected with the sweat ducts.

C. J. White (*Jour. Cutan. Dis.*, 1907, p. 50), in reporting a case of syringocystoma, discusses in detail the clinical and pathological findings in this disease and in multiple benign cystic epithelioma, and, in view of the general concensus of opinion regarding the individual identities of the two disorders, pleads for their separate classification in dermatological literature.

Pusey's patients were a father and his daughter, and, although the former was an elderly man, the lesions exhibited no malignant tendency.

Heidingsfeld's paper was based upon the study of eight cases of the disease, five of the patients (a father, two daughters, and two sons) being members of the same family. All of the sections showed the characteristic interlacing epithelial strands and colloid cysts.

Rayer (Rayer's Treatise, 2nd ed., Willis' translation, p. 996) was the first to describe the disease which we now recognize as adenoma sebaceum. He called the small tumors *végétations vasculaires*, however, because of the telangiectic condition that usually is associated with the affection.

Addison and Gull (*Guy's Hospital Reports*, Series 2, Vol. vii, p. 267) also reported examples of the disorder, which they designated as a lichen.

Pringle (*Brit. Jour. Dermat.*, 1890, p. 1) was the first to accurately describe the histology of the lesions, and the "Pringle

type" of adenoma sebaceum is as familiar to dermatologists as the "Brooke-Fordyce type" of multiple benign cystic epithelioma. The lesions vary in size from a pinhead to a split pea, seldom coalesce, and are usually symmetrically placed on the nose, cheeks, and nasio-labial furrows. In color they are yellowish or pinkish, and there is generally a dilated condition of the superficial capillaries in the affected region. The growths are benign, and usually appear in early childhood or at puberty and persist indefinitely. Persons of defective mental development are more frequently attacked than those of normal intelligence. Heredity has been noted only once (Taylor and Barendt, *Brit. Jour. Dermat.*, 1893, p. 363). Pathologically, "the lesions consist of sebaceous glands, more or less modified, but always recognizable" (Audry, *Ann. de dermat. et de syph.*, 1903, p. 563).

Poór (*Monatsh. f. prakt. Dermat.*, 1905, p. 379), would place in a separate class those cases of adenoma sebaceum that do not clinically correspond to the Pringle type. The principal differences observed in these anomalous examples are their asymmetrical distribution, the fact that they are congenital or appear very early in life, and their tendency to coalescence. In this group he would place the cases of Jamieson, Bandler, and Jadassohn, Pollitzer, and Csillag.

Krzyształowicz (*Monatsh. f. prakt. Dermat.*, 1907, p. 1, cited by Stelwagon, loc. cit.) would divide the disorder into two pathological varieties, one a true hypertrophy of the sebaceous glands which may undergo degeneration, and a second, which seems to include several pathologic deviations. The disorder is seen more frequently in males than in females; a review of the literature shows twenty-eight cases occurring in the former and seventeen in the latter. It is commoner in England than in any other country, as the reports of Jamieson (*Brit. Jour. Dermat.*, 1893, p. 138), Anderson (*Ibid.*, 1895, p. 316), Dockrell (*Ibid.*, 1895, p. 340), Perry (*Ibid.*, 1896, p. 99), Somers (*Ibid.*, 1896, p. 232), Savill (*Ibid.*, 1901, p. 24), Brummond (*Ibid.*, 1901, p. 187), Thomson (*Ibid.*, 1901, p. 275), Little (*Ibid.*, 1904, p. 176), Dore (*Ibid.*, 1906, p. 215), MacLeod (*Ibid.*, 1906, p. 218), Fox (*Ibid.*, 1906, p. 283), and others amply demonstrate.

While only a few instances of the disease have been recorded by German writers, the cases have been thoroughly worked up, and almost every investigator has suggested a new name for the affection. Marullo (*Dermat. Ztschr.*, ix, p. 166), Rosenthal (*Monatsh. f. prakt. Dermat.*, 1894, p. 88), Kothe (*Arch. f. Dermat. u. Syph.*, 1904, p. 33), W. Pick (*Ibid.*, lviii, p. 201), Poór (*Monatsh. f. prakt. Dermat.*, 1905, p. 379), Csillag (*Arch. f. Dermat. u. Syph.*, 1906, p.

165), Reitmann (*Ibid.*, 1907, p. 177), and Buschke (*Dermat. Ztschr.*, xi, p. 467), among others have contributed to our knowledge of the malady.

In America, Pollitzer (*Jour. Cutan. Dis.*, 1893, p. 473) was the first to call attention to the disease. His patient was a man, nineteen years of age. The growths were confined to a small, oblong area on the left side of the forehead, and had been present six or seven years. Histologically, their structure was not that of a typical lesion of adenoma sebaceum, although the greater portion of the tumors was made up of sebaceous glands and ducts.

G. H. Fox (*Jour. Cutan. Dis.*, 1897, p. 88; *Tr. Am. Dermat. Assn.*, 1898) has reported three instances of the affection, all occurring in girls or young women.

Gottheil (*Jour. Am. Med. Assn.*, 1901, p. 176) has described an example, in a girl of nineteen, the lesions being confined entirely to the scalp.

Recently, I have had an opportunity to study a case of multiple benign cystic epithelioma and also one of adenoma sebaceum, both in full blooded negroes. So far as I can find, neither of these diseases has ever before been noted in the colored race, although Heidingsfeld (*Jour. Cutan. Dis.*, 1908, p. 18) has recorded an occurrence of lymphangioma tuberosum multiplex in a negro man.

CASE 1. J. B.; female; married; housewife; about sixty years of age.

FAMILY HISTORY. The cutaneous history of the family is so very remarkable that I was at first exceedingly doubtful regarding its accuracy. After closely cross examining the patient on several different occasions, however, and then interviewing five other members of the family, who live in a neighboring city, I am convinced that the information given can be relied upon. To the patient's personal knowledge the following relatives have had lesions on their faces similar to those on her own: Her mother; three of her mother's sisters; all of her own sisters (9); all of her own brothers (2); all of her own children (8 girls and 6 boys); all of her oldest sister's children (11 girls and 6 boys); all of her second oldest sister's children (2 girls and 5 boys); all of her third oldest sister's children (3 girls and 4 boys); two of the next sister's children died in childhood; all of her next oldest sister's children (5 girls and 3 boys); the next three sisters died in childhood (aged 4 to 13 years); all of her oldest brother's children (1 girl and 1 boy); all of her youngest brother's

children (3 girls and 1 boy). In every instance the growths appeared in early childhood or babyhood, and persisted all through life. So far as the patient knows none ever became malignant.

Among the members of the family, the "marks" are considered rather a distinguishing feature, and they are very proud of the little neoplasms, and also somewhat superstitious concerning them. I superficially examined three of the daughters and two of the sons. All had growths on their faces, apparently similar in every respect to those seen on the mother. They would not permit the excision of the tumors, however, under any condition, and the small amount of material obtained was secured with the greatest difficulty.

**PERSONAL HISTORY.** The patient is a native of Alabama, but has resided in Kansas (first on a farm near Fort Scott, and later in Kansas City) for the past thirty-nine years. Her general health has always been fairly good, although she has at times suffered from rheumatism and from eczema of the hands. It was for the treatment of the latter ailment that she was admitted to my service in the University Medical College Dispensary, in October, 1909.

**PRESENT ILLNESS.** The tiny growths on the patient's face, forehead and neck have been present since early babyhood. They have never given rise to subjective symptoms, and none of them has ever ulcerated or broken down.

**EXAMINATION.** The patient is a brownish-black negro, with rather a straight nose, and lips of medium thickness. She is exceptionally intelligent for a colored woman. There is present a seborrhœic dermatitis of the scalp, with a considerable area of alopecia in the frontal region. The growths, which vary in size from the head of a small pin to the tip of a navy bean, are darker than the normal skin, and are distributed over the face, forehead, malar regions, and sides of the neck. There are forty-four of the lesions in all, and the smaller ones closely resemble tiny, pigmented moles. The tops are flat, or slightly umbilicated, and burnished. There are no dilated capillaries. There is no tenderness on pressure, and nothing can be squeezed out of those tumors which present a small central depression. On puncturing the lesion, however, and again applying pressure, a little blood and serum exude (as in Dyer's case, *Med. and Surg. Jour.*, New Orleans, 1, p. 530). Following the administration of pilocarpine, sufficient in amount to cause profuse sweating, the tops of the tumors are perfectly dry.

**HISTOPATHOLOGY.** Two of the nodules were excised for laboratory purposes, a small one from the left malar region and a large one



from the right cheek, near the nose. The bits of tissue were fixed and toxylin-eosin, and Weigert's solution were employed. The smaller epidermis. The cutis contained nothing abnormal. No coil or sebaceous glands were present. Sections of the larger neoplasm, however, presented a very interesting histological picture. An imper-hardened in alcohol, mounted in celloidin, and serial sections made. For staining purposes, methylene blue (Unna-Pappenheim), h  matum showed only a thickening, with increased pigmentation of the feely developed hair follicle extended downward near the centre of the growth. From the outer root sheath of the follicle finger-like projections of epidermal cells had pushed out into the connective tissue of the true skin, and in the central portion of these masses were rounded or oval accumulations of cornified epithelial cells. The sebaceous glands were decreased in size and number, but were apparently normal. No coil glands or ducts were to be found. A long, slender chain of epidermal cells, from three to five cells in width, was found extending for some distance into the cutis at a point near the margin of the tumor. A few microns below the surface, the epithelial strands encircled a small collection of hyaline substance, and, still further down, at a point where the projection ended in a club-shaped mass of irregularly arranged cells, a second ball-like collection of poorly stained epithelial fragments and colloid material was found.

A diagnosis of multiple benign cystic epithelioma was made, and later confirmed by Dr. Charles J. White, of Boston, who was kind enough to write me regarding the sections, some of which were presented to him. Dr. White suggested that the growth was more nearly a so-called tricho-epithelioma than a typical representative of the Brooke-Fordyce type of the disease.

CASE II. F. R.; male; married; laborer; about fifty-five years of age.

FAMILY HISTORY. The cutaneous history of the family is negative.

PERSONAL HISTORY. The patient is a native of Georgia, and a resident of this city. His general health has always been good, with the exception of an occasional attack of lumbago. It was for the relief of this ailment that he came to the University Medical College Dispensary, in January, 1911, and I am indebted to one of the senior students, Mr. U. G. McElvain, who became interested in the eruption on the patient's face, and brought the case to me for diagnosis.

PRESENT ILLNESS. The patient first noticed the lesions when he



was about fifteen years of age. He thinks no new ones have appeared since his twenty-first birthday. In no instance have the growths coalesced, and no subjective symptoms have been present at any time.

**EXAMINATION.** The patient is a coal-black man, with thick lips, and short, kinky hair. Mentally, he is far below the average, even for a negro. He speaks slowly and haltingly, and at times appears to be in a sort of stupor. Scattered over the trunk and thighs are numbers of pendulous fibromata, the majority of which are about the size of a split pea. Distributed symmetrically over the nose and the flush areas of the cheeks are numerous small, firm, smooth, black tumors, varying in size from the head of a small pin to the tip of a navy bean. There are sixty-eight of these lesions in all, and none shows signs of ulceration or degeneration. The hair is thick and healthy looking, and there is no evidence of seborrhœic dermatitis. The tumors are confined almost entirely to the sides of the nose and to the adjoining areas on the cheeks lying between the naso-labial folds and the margins of the lower lids. The tops of the larger growths are smooth, flat, and shining, but in some of the smaller ones a slight central depression is visible, and a comedone-like mass can be squeezed out, otherwise the condition bears a very close clinical resemblance to the case of multiple benign cystic epithelioma just described. A few telangiectases are present.

**HISTOPATHOLOGY.** Two of the neoplasms, one from either cheek, were excised for microscopical examination. Each of the nodules was cut in two, and the portions fixed and hardened in alcohol and in 4 per cent. aqueous solution of formalin, respectively. For staining purposes, methylene blue, hæmatoxylin-eosin, Weigert's solution, and scarlet red, with hæmatoxylin as a counter stain, were employed. The smaller growth was made up of two imperfectly formed (and empty) hair follicles, with subjoined masses of enormously hypertrophied sebaceous glands, the largest one of which connected directly with the surface. The cells and nuclei stained clearly and well. Two of the larger masses of glandular tissue were divided into separate lobules by fine, fibrous septa, somewhat resembling those seen in Boeck's (*Virchow's Archiv*, lxxxi, p. 503) case, although fatty degeneration was noted in only one of the cell collections, a small, oval mass, situated some distance from the main body, and no concretions were found. Histologically, the other tumor was less typical of the Pringle type, although it more nearly fulfilled Unna's (*Histopathology of the Diseases of the Skin*, Walker's translation, p. 820) definition of a true steatadenoma ("A benign tumor-like growth of ir-

regular formation, proceeding from the epithelium of the sebaceous glands, in the outgrowths of which fatty, but no colloid metamorphosis takes place"). Surrounding the lower third of an abortive hair follicle were numerous small, oval, or irregularly oval, collections of sebaceous glands. No horny pearls or colloid material was found, although portions of the glandular substance had in some instances so softened as to become almost homogeneous and had practically lost its epithelial identity. The interacinal septa were much thicker, and the connective tissue more dense than in the smaller growth, and the elastic tissue was greatly decreased in amount, probably a result of pressure atrophy. The individual cells in the sebaceous masses were smaller and less plump than those observed in sections of the first tumor, and the number of lobules was increased fully three-fold, as compared with the glandular appendages of a normal hair in this region.

CONCLUSIONS. The findings in the example of multiple benign cystic epithelioma here reported would certainly serve to differentiate it from any case of lymphangioma tuberosum multiplex that has yet been recorded.

It more nearly resembles the type first described by Jarisch than any other, although some features noted in his case are absent in this one, while some of those seen in a typical instance of the Brooke-Fordyce type of the disease are present.

The histopathology of the lesions certainly tends to emphasize the fact that these little growths may vary greatly in form and structure, and yet retain the essential characteristics that enable us to include them in a fairly well-defined class of their own, and, incidentally, it also serves to prove the futility of the endeavors of various investigators to separate, because of a few minor anatomical differences, a more or less typical example of the disease from the main group in an effort to prove the existence of a new clinical or pathologic entity.

In the second case, the smaller growth shows simply the presence of a circumscribed hypertrophy of the sebaceous glands, and not a true adenoma. The larger neoplasm, however, I believe to be a tumor which practically fulfills Unna's definition of a steatadenoma, although it probably is wiser, in the present state of our knowledge, to include both under the broad designation of adenoma sebaceum.



Fig. 2.

Adenoma sebaceum, showing character and distribution of lesions.



Fig. 1.

Multiple benign cystic epithelioma, showing character and distribution of lesions.





FIG. 4.

Small sebaceous tumor showing imperfectly developed hair follicles and hypertrophied glands. Obj.  $\frac{1}{4}$ , no ocular.



FIG. 3.

Multiple benign cystic epithelioma, showing cornified masses of epithelial cells within epidermal projections, sebaceous glands and a strand of epithelial cells extending downward from basal layer of epidermis. Obj.  $\frac{1}{4}$ , no ocular.





## SOCIETY TRANSACTIONS.

## NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, April 25, 1911.

WILLIAM B. TRIMBLE, M.D., *President*.**Granuloma Necroticum.** Presented by DR. JACKSON.

The patient was a man twenty-three years old. There was nothing of special moment in his family history. His general health was good. He had neither cough, nor night sweats, but he had well-marked enlarged glands on both sides of his neck.

The disease for which he applied for relief began about four years ago on his hands and ears. He thought it began in the summer, but that the seasons had no influence on its course. Two years ago he had a von Pirquet test made twice, both of which were very positive. He was then treated with tuberculin injections, and all the lesions disappeared. After eight months a relapse occurred with as pronounced lesions as at first. The lesions began as pinhead-sized papules of red color. They increased in size to that of a small pea, when a yellow point developed that looked as if it contained pus. When the lesion was a little larger the yellow point dried into a crust which rested in a depression. When the crust fell it left an irregular loss of substance; and when the lesion had flattened, the color faded out, and a variola-like scar remained. Some of the lesions were as large as good-sized peas.

The lesions were discrete and scattered about the arms, especially their posterior surfaces, the backs of the hands, buttocks, lower legs, and feet, and were very well marked on the margins of the ears. There the destruction caused by them gave the edge a gnawed appearance.

DR. FORDYCE said it was the most extensive case of necrotic granuloma he had seen. The majority of these cases in his opinion were tuberculous; they were frequently associated with enlarged lymph nodes and practically all of them gave a positive von Pirquet reaction.

DR. HOWARD FOX said that it was a very unusual case. The condition of the ear somewhat resembled that of Otto R., who had been presented by his father at the last meeting, showing the so-called condition of necrotizing chilblains of the ears.

**Case for Diagnosis.** Presented by DR. FORDYCE.

The patient was a Russian, twenty-nine years old, a junk dealer by occupation, and was living sixty miles from Chicago when his eruption first appeared. Two and a half years ago he developed a lesion on the forehead which was operated on, and recurred two months later at some

distance from the site of operation. Nine months ago a nodule appeared at the right ala nasi, which was brownish-red in color and semi-fluctuating. In addition to this lesion he had one over the right eyelid. Several Wassermann tests were made and were negative, and he also had a negative Moro test. An examination of the contents of the lesions failed to show the blastomyces or other organisms. Histologically the tissue was a granuloma containing some giant cells, and suggested tuberculosis or syphilis.

DR. BRONSON thought that the scars on the face looked very much like syphilis scars, but that the rounded, elevated lesion between the eyebrows would hardly have persisted for so long a time without some central depression or other signs of involution had the disease been syphilitic.

DR. HOWARD FOX inquired of Dr. Fordyce if the case had been treated with mercury. Dr. Fordyce replied that he thought not.

DR. KLOTZ said that the case suggested syphilis very strongly.

DR. WHITEHOUSE said that it seemed to him more like a scrofuloderma or some tuberculous process than syphilis. The duration of the disease and its indolent character made him feel doubtful of its syphilitic nature. While the scars somewhat simulated those of syphilis, he would rather favor a diagnosis of tuberculosis.

DR. TRIMBLE said that from a clinical observation alone he would be inclined to think the condition luetic, but it might be any of the conditions mentioned by Dr. Fordyce. The existing evidences of former multiple foci of ulceration and the configuration on the side of the nose would strongly suggest luec. Of course the Wassermann reaction was against this diagnosis—but negative tests were not infrequent in late syphilis; due to various reasons. He recalled a case seen recently, of a lesion on the upper lip which was typically luetic from a clinical standpoint. It had been present for a year. Two blood examinations were made about two weeks apart, and both were negative.

The patient was a rather intelligent man and claimed to have had no previous syphilitic treatment. He was given "mixed treatment" by the mouth as a test, and the condition promptly healed. This was simply mentioned as being a case which gave a negative Wassermann without previous treatment.

DR. FORDYCE considered the case either one of tuberculosis or syphilis. It was his intention to institute active antisyphilitic treatment even though the Wassermann reaction was negative.

#### Chancre of the Ear. Presented by Dr. KINGSBURY.

The patient was a burlesque actress, twenty years of age. The lesion had been present at the lobule of the left ear for seven weeks. It was but slightly indurated and was about the size of a five-cent piece. The posterior auricular gland was considerably enlarged, but the posterior cervical glands were barely palpable. For about one week there had been a few crusted papules on the scalp, and several small papulo-squamous lesions on the face and forehead. There was no eruption on the trunk and no general adenitis. Several Wassermann reactions had been negative.\*

\*A positive Wassermann reaction was obtained subsequent to the meeting.

DR. BRONSON, DR. HOWARD FOX, DR. DADE and DR. FORDYCE agreed with the diagnosis.

DR. KLOTZ thought that the lesions on the scalp might be a preliminary localized syphilide such as was occasionally seen, where a few lesions would precede the general eruption by several weeks. He had seen and described some cases of just this kind.

DR. WHITEHOUSE said that clinically he would regard it as an initial lesion. The indurated border and the flat moist surface suggested an initial sclerosis. He inquired whether there was a history of any traumatism.

DR. KINGSBURY replied that there was a definite history of contagion.

DR. TRIMBLE agreed with the diagnosis of chancre, but was somewhat surprised to hear that the Wassermann was negative at so late a date. He had, however, observed, in handling a great number of cases of lues, that the time for antibodies to form varied greatly in primary syphilis.

In a genital chancre that he saw some time ago, after having demonstrated the spirochætæ, the Wassermann was positive on the eleventh day. This case of Dr. Kingsbury's with a negative Wassermann after five weeks, was somewhat unique. The usual explanation would probably have to be applied here, namely that the spirochætæ were "walled off" and not enough had penetrated the wall to cause antibodies to form.

### Erythematous Lupus of Lower Right Eyelid. Presented by DR. DADE.

The patient was shown because the lesion was in a somewhat unusual situation, and was said to have followed a sty.

DR. FORDYCE recalled a case which came to his clinic with a similar lesion. In lupus erythematous of the lower lid there was danger of ectropion no matter what treatment was employed.

DR. G. H. FOX recalled the case of a very beautiful girl, who had a small patch of erythematous lupus on the lower eyelid. The lesion was a superficial one, smaller than in Dr. Kingsbury's case, but in the same locality. It disappeared under carbolic acid treatment.

DR. HOWARD FOX said that some of the members might recall the lantern slides shown several years ago at the American Medical Association by Dr. Heidingsfeld. They represented very severe cases of lupus erythematous which had resulted in destruction of the eye.

DR. BRONSON said that some years ago he had presented before the Society, a young girl of thirteen or fourteen with several patches of lupus erythematous on the face, and the most persistent of these were on the lower eyelid. The exfoliative treatment proved very successful in that case.

### Extensive Superficial Morphœa: Possible Relation to Syphilis. Presented by DR. HOWARD FOX.

The patient, a man twenty-eight years of age, was presented not only on account of the extent and character of the eruption, but on account of a possible relationship to syphilis. Six years before, he had suffered from a genital sore, which had lasted three weeks and which was followed by inguinal adenitis. Several weeks later the present eruption appeared and had slowly increased to double the original area, but had otherwise not changed. The patient had consulted two physicians

at the outset, who were convinced that he had been infected with syphilis and who treated him with mercury and potassium iodide for four years. During this period he had numerous sores in the mouth from time to time.

The present eruption began as two spots in the groin and practically attained its present distribution within two or three years. The main part of the eruption consisted of a large sheet extending over the external aspect of both hips, meeting anteriorly and covering the lower part of the pubic region and upper quarter of the antero-external aspects of the thighs. The upper limit of this large area was about three inches below the free border of the ribs. There were also three dollar-sized macules over the sacrum and several dollar to palm-sized areas over the right scapular region. There were two circular patches about two and a half inches in diameter upon the left leg, and palm-sized patches over the external aspects of the forearms and cubital spaces. The face, hands and feet were free. Portions of the patches presented a well-defined border, while others shaded off gradually into the normal skin. The central portion of the large patches presented a dirty yellow or skin color, while the peripheral portions presented a border of striking violaceous color, varying in width from one to two inches. The actual border showed a line about an eighth of an inch in width of a darker color. The patches were smooth, dry, devoid of any scaling and showed no appreciable thickening of the skin. The follicles appeared rather prominent. There was no change in sensation. The Wassermann reaction was negative on two occasions within the past month, the patient having had no anti-syphilitic treatment for a year.

Dr. WHITEHOUSE thought it was a skin eruption in the atrophic stage, and considered it a scleroderma. It might come under the category of morphœa, but the shiny character of the surface, the apparent atrophy, and the color—the violaceous border, which Dr. Fox spoke of—led him to the opinion that it was a sclerodermatous process in the atrophic stage. What might be its relation to syphilis he could not say; not having seen the original eruption at the time of the lesion on the penis one could not be sure that it was the same. Dr. Fox's patient presented a condition similar to those cases of scleroderma following syphilis. Dr. Fordyce had reported an atrophoderma in a syphilitic subject and it was possible for syphilis to produce such atrophic changes in the derma, and the speaker could see no reason why syphilis should not produce an atrophic sclerodermatous lesion. In the morphœa type of scleroderma the cases that he had tested with the Wassermann reaction had been negative; a positive reaction was generally obtained in those cases of diffuse scleroderma with sclerodactylia.

Dr. FORDYCE said it was difficult to say what the condition was. There was no thickening of the skin and it did not impress him as a scleroderma.

Dr. G. H. FOX said that he had seen the case some days before, and though it did not strike him as a typical case of morphœa, yet the circumscribed patches had the peculiar border—more or less violaceous—which suggested this disease. By artificial light it certainly did not seem so much like morphœa, and the localization of the patches was not typical.

Dr. BROXSON said that the case did not now present the essential characteristics of morphœa. There was no sclerosis. There was certainly some atrophy



of the skin present, which seemed slightly depressed. Were it simply the atrophic stage of a scleroderma or morphœa, one would expect to find some immobility of the tissue, although there might not be any actual sclerosis. He did not regard the pink border as of very essential importance. It had been attributed to a thinning of the epidermis at the borders of the lesions, which permitted the blood vessels to show through. He regarded the case as a neuropathic affection, and thought that the essential disease was a cutaneous atrophy.

DR. TRIMBLE said that he had noted some follicular atrophy, but hesitated to make a diagnosis on the case. It might be morphœa, but he had never seen a case of morphœa like it.

DR. G. H. FOX said that perhaps he attached too much importance to the purplish tint, but he had frequently seen incipient cases with only purplish patches. After a duration of six years, however, this could not be called an incipient case, and there ought to be more atrophy and a shiny instead of a wrinkled appearance of the skin.

DR. HOWARD FOX said that the case had been examined a month ago very carefully by daylight, and as a tentative diagnosis morphœa seemed the best that could be made. He was somewhat skeptical as to the previous infection with syphilis, and thought at all events that the present condition had no relation to syphilis.

#### Urticaria Pigmentosa (?). Presented by DR. G. H. FOX.

The patient was a Russian, a tailor, forty-seven years of age. He stated that as a child he had suffered from chicken-pox, which had been followed by considerable scarring. About four years ago, during the summer, the present eruption suddenly appeared and with the exception of a few new lesions, had remained unchanged up to the present time. The eruption consisted of discrete, pea-sized, round and elongated macules, scattered over the trunk and extremities. The head, palms and soles were free. There was no grouping whatever and no preference for any particular surface of the extremities. The lesions were smooth, dry, and not elevated above the surface of the skin. They showed no evidence of scratching. The color in general was dull and in many cases of a distinct raw ham type. In fact the eruption at first glance looked strikingly like a macular or maculo-papular syphilide. The color of the macules could not be effaced by pressure. The lesions became distinctly elevated upon friction and the intervening skin showed a well-marked condition of factitious urticaria. Upon the back, especially over the lumbar region, were numerous scars, apparently the result of a former varicella. The patient was well-nourished and appeared to be in good health. He had, however, suffered from occasional attacks (according to his statement) of ordinary "hives," on account of which he had sought medical aid. A Wassermann reaction made two years previously was negative. A second test recently made was also negative. The patient had not in the meantime taken any mercury. The urine showed no abnormal constituents.

DR. HOWARD FOX said that he had seen the patient once two years before, and had made a Wassermann test at that time, with a negative result. As he

recalled the case, it presented then practically the same appearance. He would not hazard a diagnosis.

DR. KLOTZ said that it did not present the usual appearance of urticaria pigmentosa, which, besides, usually began at a very early age.

DR. G. H. FOX said that he could not make a positive diagnosis. The fact of the man's age did not count against the diagnosis of urticaria, for some very typical cases of urticaria pigmentosa developed in adult life. The itching had never been sufficient to trouble him at all. The question of granuloma necroticum was considered, but none of the lesions seemed to have any central crust or anything that would suggest an ordinary tuberculide. He hoped later to make a histological examination, which would throw some light on the condition.

#### Vitiligo. Presented by DR. KINGSBURY.

The patient was a well-developed school boy, fifteen years of age. He was born in this country of Russian parentage. The lesions first appeared about two years ago. When presented, probably half of the skin was affected. The patches were large and symmetrically distributed. Several patches in the scalp were covered by white hair.

DR. TRIMBLE said that the case shown was a very beautiful example of leucoderma and he had nothing to say in regard to treatment, but he would like these remarks to be taken in the nature of a preliminary report as to a *possible* cause. He was strongly inclined to think that tuberculosis might be a factor in the production of this condition. The pigmentary syphilide or syphilitic leucoderma, which was characteristic and diagnostic of former lues, was well established. Tuberculosis being an infectious granuloma, like syphilis, might produce some anomaly of pigmentation. This was brought strongly to mind some ten years ago, by four cases, two of which had died early of tuberculosis. One of the patients, a robust looking young woman, who had typical leucoderma on the face and neck, developed tuberculosis a year later.

Another case, also a healthy looking young woman, was sent to the speaker by a prominent oculist, with lesions on the face and neck. She seemed at the time in good physical condition, but he heard later, through some of her friends, that six or eight months after, she developed acute tuberculosis and died. One of the others had a strong family history of tuberculosis. The fourth case he could not recall clearly enough to make a report.

The speaker said that he had, at the present time, two cases under observation, both of them very healthy people, but he was keeping in touch with them, in case anything developed. He had collected a series of more than twenty cases from private practice with the view of studying them carefully, but as yet, had not been able to do so. The more he looked into the matter, the more he thought that tuberculosis was probably an ætiological factor.

DR. G. H. FOX said that considering the large number of cases in which there was no tuberculous history, it seemed to him that these cases would simply prove that vitiligo was not incompatible with tuberculosis.

DR. SHERWELL said that he had seen a number of lesions which had persisted for a number of years in old persons; certainly, if they were going to develop a tuberculosis they were taking their time about it. He had seen many very old people in Mexico with this condition. It was rather common among negroes, many of whom had it for a long time and still seemed robust.

**Case for Diagnosis.** . Presented by DR. KINGSBURY.

The patient was a house maid, twenty-five years of age. She was born in Norway, but had lived in this country for about four years. She had had erythematous, slightly scaly, patches over the bridge of the nose and on the right cheek for over two months. The lesions were about the size of a silver dollar. On the left arm there was a hard nodule, nearly half an inch in diameter. The Wassermann reaction was weakly positive.

Most of the members thought that the case was one of syphilis.

DR. KINGSBURY said that the lesions on the face were not very characteristic of lues, and on account of the woman's nationality he had at first considered the possibility of beginning leprosy. He was now convinced, however, that it was specific.

**Case for Diagnosis.** Presented by DR. KINGSBURY.

The patient was a female, nineteen years of age, an operator on underwear. The girl was small, but strong and fairly well developed. Her general health was said to be good. About two months ago a grouped papular eruption developed on her neck, and soon similar patches appeared in the axillæ, groins, and at the bends of the elbows, and knees. There were many scattered lesions on the trunk, extremities, and chin. Many of the papules were soft, and some vesicles were found. Apparently there was no pruritus. The hair had been falling for over a month, and the appearance of the scalp was somewhat suggestive of the alopecia of syphilis.

DR. SHERWELL said that from a hasty examination he had thought that it was lichen planus. There were certainly a number of irregular-shaped, quadrilateral patches. He was still inclined to so consider it.

DR. BRONSON said that he could not quite reconcile the appearance of the case to lichen planus. The papules were not hard and horny enough for that disease and they were too hyperæmic. There was no cornification and the absence of itching was another important feature. It did not seem like eczema, either. It might be some form of lichenification of the skin, but he did not care to make a diagnosis.

DR. HOWARD FOX agreed with Dr. Sherwell that the case resembled lichen planus; on the neck, forearms, and trunk, there were groups of papules that had all the ear-marks of lichen planus. They certainly were not patches of eczema.

DR. JACKSON said that there was no doubt but that the case was one of lichen. The question was what sort of a lichen it was. The location of the eruption along the inner side of the arms, the arm pits and the sides of the chest, the region of the crotch, and the bends of the elbows and knees was strongly suggestive of eczema. The shiny papules, like those of lichen planus, that were present, were sometimes seen in eczema. But there was no marked tendency for the lesions to form patches, as was so common in eczema, and itching was not marked, though there were some excoriations. On the other hand, the absence of itching, and the infrequency of typical papules did not favor the diagnosis of lichen planus. He was doubtful of the diagnosis, but was inclined to regard it as a lichen planus of atypical form.

DR. G. H. FOX said that he had seen a number of cases of lichenoid eczema with the same shining papules seen in this patient. Years ago he had described in his note book one or two cases under the diagnosis of lichen planus, but when he later became familiar with true lichen planus he made up his mind that these cases were simply lichenoid eczema.

DR. FORDYCE said that many of the lesions presented the appearance of lichen planus. There was a good deal of pigmentation, which spoke for lichen planus.

DR. KLOTZ was inclined to consider it lichen planus. The color of the lesions suggested it. The patient had a very thin skin, and that might account for some of the features being missing. Itching was less likely to be absent in eczema than in lichen planus, particularly in a patient with features similar to those of the case under discussion.

DR. WHITEHOUSE said that it had more features belonging to lichen planus than to any other eruption, but it was a very unusual type. Certain characteristics were against lichen planus, but Dr. Fordyce had mentioned pigmentation, and this was very distinct. He had noticed some pigmented places on the thighs and arms, and also some on the wrists. The patient had had the condition for only two months, and that might account for some of the peculiarities. He would call it an unusual type of lichen planus. The absence of itching was not inconsistent with that diagnosis.

DR. DADE said that he saw nothing characteristic of lichen except the shining papules, and these were too conical for that disease. The lesions near the axilla were in patches and were crusted, as in eczema. He thought it was a papular eczema.

DR. TRIMBLE said that aside from the subjective symptoms, and looking at the lesions alone he would call it lichen planus, with unusual localization.

DR. KINGSBURY said that while he was quite positive that it was not a case of lichen planus, he was at a loss to know how to designate it. Merely for the sake of making some sort of diagnosis he would call it a lichenoid dermatitis. The eruption presented to him, however, several unfamiliar features.

#### **Tuberculosis Verrucosa Cutis.** Presented by DR. G. H. FOX.

The patient was a barber by occupation, and presented a very well-marked condition upon the backs of the hands.

#### **Extensive Serpiginous Syphilide.** Presented by DR. HOWARD FOX.

The patient was a Swedish woman, forty-one years of age. She gave no history of infection and had never received any anti-syphilitic treatment. She presented an extensive eruption upon the arms, shoulders, neck, and lower lip, of tubercular lesions with well-marked circinate and serpiginous arrangement. She had recently been given two intravenous injections of salvarsan.

#### **Epithelioma (Six Cases) Treated by Curettage and Applications of Acid Nitrate of Mercury.** Presented by DR. SHERWELL.

Dr. Sherwell presented six patients who had had extensive and deep examples of epithelioma, which involved the orbit. The cases had all

been treated by the regular technique which consisted of a thorough curettage followed by the use of the acid nitrate of mercury.

Two of the patients had been previously presented to the Society and were familiar to the members.

Some of the patients presented what seemed to be a complete cure, while others were markedly improved.

DR. HOWARD FOX showed a photograph of the patient with morphœa who had been presented at the last meeting.

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#### PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held in the Gross Room, at the College of Physicians Building, on March 13, 1911. DR. CHARLES N. DAVIS, *President*.

##### **Keratoderma Erythematosa Symmetrica.** Presented by DR. HARTZELL.

The patient, a girl of eighteen years, gave the history of having been attacked by the present condition just three weeks ago. She had performed hard manual labor for some years and for the last few months had worked in a laundry. In this latter occupation, however, her hands had not been in contact with the soap or the water. There was now a symmetrical eruption involving the palms of both hands, the soles of the feet and the elbows. The patches were sharply margined and involved the entire palmar and plantar surfaces. The palms and the soles were red and markedly hyperkeratotic. The disease also extended onto the dorsal surfaces of the hands and of the feet. Both elbows likewise exhibited sharply margined patches, thickened, scaly, and with a reddish areola; these latter areas were one-half dollar in size.

DR. HARTZELL referred to the papers written by Besnier and by Brooke, who reported somewhat analogous cases.

##### **Multiple Patches of Lupus Vulgaris.** Presented by DR. HARTZELL.

The patient, a married woman of twenty-one, stated that the present outbreak started at the age of one year. There were fully a dozen scars on the arms and the legs from dime to one-half dollar in size. The scars were mostly soft, pliable and white, a few were bound down to the tibia or the fibula, suggesting former bone involvement. The patient was somewhat anæmic in appearance, with Pott's disease, but there was no cough. There were two dark-red patches on the elbows, on the left side one-half dollar and on the right one-quarter dollar in size. These areas were thickly infiltrated, with slight ulceration in the centres surrounded by scar tissue. They exhibited typical lupus nodules.



**Case for Diagnosis.** Presented by Dr. SCHAMBERG.

A male of thirty presented about a dozen cutaneous and subcutaneous nodules, hazelnut, and smaller in size, firm to the touch, some apparently lobulated. According to the history the condition originally started one year ago. The tumors were scattered over the forearms, the abdomen and the back. The skin over these lesions was of a natural color and the texture was unaltered. A Wassermann test gave a positive reaction.

Dr. SCHAMBERG referred to a case in which there was cartilagenous, infiltrated growths of the skin which disappeared under anti-syphilitic treatment.

Dr. HOWARD FOX mentioned a somewhat analogous case.

**Unusual Type of Syphilitic Eruption.** Presented by Dr. HARTZELL.

The patient, a negro male of thirty years, presented a generalized eruption of five weeks' duration. The various concomitant signs of syphilis were present; muscular and osseous pains, pharyngitis, iritis, and apparently a neuritis of both forearms, and hands, causing these extremities to be practically useless. The eruption was most marked upon the trunk and consisted of miliary papules, chiefly follicular, small pinhead in size. These lesions tended to form groups, corymbose-like. There were also a few papulo-squamous lesions. Pruritus was a marked characteristic.

**Benign Cystic Epitheliomata.** Presented by Dr. SCHAMBERG.

The patient, a male of forty years, had been under Dr. Schamberg's care at various times, for some years. Eight years ago the present condition started and hundreds of these lesions had developed on the face, the neck, and the back. The patient had had as many as fifty of the tumors on the face at the same time. There was now a large lobular lesion on the left upper eyelid, also a smaller hemispherical growth on the right upper eyelid. Several of the tumors were noted on the lower eyelids. These lesions had shown a tendency to grow and to ulcerate. The actual canterly had been employed to destroy a large number of the growths. The patient was previously presented to the Society some years ago.

**Extensive and Deep-Seated Type of Lupus Erythematosus.** Presented by Dr. HARTZELL.

The patient, a male of twenty-four, born in Germany, a boiler maker by trade, had had the present condition for the last ten years. The nose and the greater portion of both cheeks had been attacked by the disease and there was a considerable number of active lesions still present. There was marked scarring where the former disease had been. The entire surface of both ears had been attacked and the outer cutaneous portion

had been destroyed. Dr. Knowles had applied the solid carbon dioxide to the cheeks which had caused some improvement in the condition.

**Molluscum Contagiosum.** Presented by DR. SCHAMBERG.

The patient, a boy of nine years, exhibited about fifty typical lesions, limited to the anterior portion of the trunk and to the shoulders, of two months' duration. No history of contagion could be elicited.

DR. HOWARD FOX referred to the papers written by Dr. Knowles on this subject.

DR. HARTZELL mentioned a case that he had recently had under his care, a man of eighty years, with typical lesions of this disease.

DR. KNOWLES referred to four cases of this condition, that he had recently seen in the same family, the grandparents, the mother and her infant being attacked.

**Case for Diagnosis.** Presented by DR. STELWAGON and DR. GASKILL.

The patient, a male of twenty-eight years, was exhibited with two split-pea-sized, flat, shiny, violet-red lesions, sharply margined, with slight scales on the surfaces and with somewhat raised borders. The eruption was limited to the meatal opening, and had lasted for ten months. Two months before the start of the eruption the patient had had an attack of gonorrhœa and had been treated with a strong argyrol solution. This stimulating treatment was considered as a possible ætiologic factor.

Those present considered that it was probably a case of lichen planus.

**Lichen Planus.** Presented by DR. SCHAMBERG.

The patient, a mulatto of thirty-one years, was presented with an eruption on the inner surface of the left lower leg, below, and to the inner side of the popliteal space. The outbreak was also noted upon the forearms and on the outer side and in the popliteal space of the right leg. The condition originally started some months ago. The major part of the active disease had now subsided and very marked pigmentation remained.

**Syphilis and Iodide Eruption.** Presented by DR. STELWAGON and DR. GASKILL.

A patient of twenty-one years was presented with two distinct types of eruption. The history, like so many obtained from patients, was rather indefinite; apparently, however, eleven weeks ago he was operated upon for an obstruction of the urethra, near the meatal opening; this stricture was probably caused by a urethral chancre. A generalized eruption developed with the concomitant signs of syphilis. A few weeks ago he was placed by another physician on mercury and iodide. When presented, there was an eruption of flat, papulo-squamous lesions on the forearms

and the legs, and an outbreak, inflammatory in type, papulo-pustular, some with an erythematous areolar, on the face and the back. The former outbreak was probably the remains of the syphilitic exanthem and the latter was caused by the ingestion of the iodide.

**Epithelioma of the Tongue.** Presented by DR. PFAHLER.

The patient, a male of fifty-four years, had been referred by Dr. Jarrett, on February 13, 1911, for treatment of a growth on the left side of the tongue, about one-quarter inch in diameter and elevated approximately one-eighth of an inch. Six weeks previously he had bitten his tongue, the tumor forming at the site of injury. It had received treatment with the electric needle, but recurred. Dr. Pfahler destroyed the growth by fulguration at the time of the patient's first visit and had since X-rayed the affected area. The site of the original tumor was now healed and was apparently cured. No microscopic examination had been made.

**Syphilitic Infant Treated with Salvarsan.** Presented by DR. SCHAMBERG.

A negro infant of ten months was presented which had been treated a few days before the present meeting, with an injection of twelve milligrams of "606." Although there were still a few syphilitic papules around the anal and vulvar region, the condition had been much ameliorated by the injection.

FRANK CROZER KNOWLES, M.D.,  
*Reporter.*

## MANHATTAN DERMATOLOGICAL SOCIETY.

January, 1911.

ALBERT C. GEYSER, M.D., *President*.**Epithelioma Treated with One Application of the X-Ray.** Presented by  
DR. MACKEE.

The patient, who was from Dr. Fordyce's clinic, was of Irish birth and sixty-four years of age. The lesion was situated on the right cheek and involved the tragus of the ear. It was not of the rodent ulcer type but was a tumor, elevated about one-quarter of an inch, and was about two-thirds of an inch in diameter. Clinically the growth resembled a squamous-celled epithelioma. According to the history the lesion had been present for two years. On December 15, 1910, a full erythema dose of the X-ray had been applied. At the time the case was presented to the Society, which was less than a month after treatment, there was still some erythema present, and the growth had practically disappeared, but there was still a slight verrucous appearance at the outer margin, which was undoubtedly malignant in nature. The speaker thought that this would disappear in a week or two without further treatment, as the full benefit of the single dose method was not obtained inside of six or eight weeks. In case of an incomplete cure a second application would be necessary.

DR. GOTTHEIL expressed his admiration of a radiotherapeutic technique that would show so much good effect with no untoward result from a single application. Nevertheless, the epithelioma was still present in unmistakable form, and the case confirmed his opinion that whilst great improvement and even what a casual observer might call a cure could be effected with the X-ray, a relapse usually occurred. The great majority of these cases could not be observed long enough to warrant a positive opinion. Those that he had treated with the X-ray, even when apparently cured, showed a relapse in from six months to a year. On the other hand he had had similar cases treated with arsenious acid that had remained well for from four to six years. He regarded the X-ray treatment as distinctly inferior to that by the curette, arsenic, the acid nitrate of mercury, or the knife. Yet it had a field, as in very old persons, or for lesions on the eyelids, etc., where more radical treatment was inadmissible.

DR. GEYSER said that these small epitheliomata, when occurring in the aged, were not particularly malignant and it was in such cases that most any method would produce brilliant results.

DR. MACKEE said that if a cutaneous epithelioma could be cured at all with the X-ray, it could be cured with the single dose method as well if not better than with divided doses. At times two and in some cases three applications might be necessary. The second treatment, however, unless given several months after the first, must be of very much shorter duration. He did not agree with Dr. Gottheil regarding recurrences, for the speaker had seen quite as many relapses after surgical procedures as after the Roentgen therapy. It was, however, a well-known fact that when an epithelioma recurred after having been apparently cured two or three times by the X-ray, the process appeared to be

more malignant than when the relapse followed ablation. The speaker thought that this was possibly due to the divided dose method, where short treatments were given over a long period of time. In this way the cells not only of the malignant process but also of the normal tissues were at first stimulated, then over-stimulated and finally atrophied. In addition, a great deal more ray was given than was necessary to destroy the lesion. It appeared far more rational to give just enough X-ray to cause the disappearance of the lesion and to apply it, if possible, at one sitting. It was advisable, the speaker thought, when the process relapsed after having been cured by the X-ray, not to again resort to the same measure, but to ablate or curette and cauterize if possible. Replying to Dr. Geyser, the speaker said that clinically, this was not the type of epithelioma in which the best results could be obtained. In addition to its being of the tumor instead of the rodent ulcer type, it involved the ear and he had found epitheliomata, when situated in this location, or on the lateral surface of the nose, or when involving the mucous surface of the lip, exceedingly difficult to manage. In regard to the single dose method the speaker said he would like to add a warning: Epitheliomata and tinea tonsurans were the lesions best adapted to the method, but it might be dangerous in extensive cases of mycosis fungoides for the reason that if many tumors were treated in a short period of time the resulting intoxication might prove injurious to the patient. And until a perfectly reliable technique was developed it was not wise to employ the method in the treatment of cosmetic diseases like acne.

**Lichen Planus with Lesions on the Buccal Mucosa.** Presented by DR. KINCH.

The patient was a well-nourished man, fifty years of age. Three months before presentation, he noticed millet-sized papules on the inside of the right ankle and on the abdomen. Some were scaly and all were of a dark-violet color. They gradually increased in number and in size and were finally thickly distributed over the body below the waist line and on the lower limbs. Many were also seen on the forearms, mostly on the dorsal surfaces. There was no pruritus. The largest lesions were six or seven millimetres in diameter, and there were a few patches of an annular configuration. The glans penis was covered with flat, angular papules. There were also lesions on the buccal mucosa.

DR. GORTHEIL said that lichen planus, without either objective or subjective signs of itching, was certainly very exceptional; yet the case was typical in all other respects, and the absence of one symptom, no matter how important, would not invalidate the diagnosis.

DR. HUMMARD thought he saw some evidence of scratching, which would indicate that pruritus was present.

DR. KINCH said such a condition was usually met with in patients who were ill-nourished, but that this patient appeared to be particularly healthy.

**Cheilitis Glandularis.** Presented by DR. WISE.

F. W. S.; male, thirty-one years of age; born in Germany. The disease began in the middle of the lower lip, about six years previous to his presentation to the Society. When presented, the entire lip was



involved, and showed a large number of patulous glandular orifices which exuded a tenaceous mucus. Although he denied syphilis the patient had been receiving anti-syphilitic treatment for the last six years without result. An examination for spirochætæ was negative. There was some involvement of the mucous membrane of the mouth, and he had the so-called scrotal tongue.

**Peliosis Rheumatica.** Presented by DR. BLEIMAN.

The patient was a male, fifty-four years of age, and a native of this country. He had always enjoyed good health until the age of fifteen, when he was attacked with acute articular rheumatism from which he continued to suffer, with acute relapses and corresponding remissions, until the age of eighteen. Since that time he had never been absolutely free from his articular pains, though never confined by any marked or acute relapse. The patient was a marked alcoholic, had a chronic interstitial nephritis and a cardiac lesion. The eruption consisted of discrete and confluent purpuric lesions. The eruption was most marked on the lower limbs, chest, abdomen and arms. Although the patient was in poor general health there were no marked constitutional disturbances such as hæmorrhage from the mucous membranes, etc.

DR. GOTTHEIL said that the purpura was evident and extensive, but in the absence of any recent acute history and of any general articular symptoms, he would hesitate to diagnose a peliosis rheumatica merely because the patient was an old rheumatic. The man admitted having taken patent medicine, which probably contained some preparation of iodine, and this was probably the cause of the eruption.

DR. MACKEE thought that the eruption was due to potassium iodide. Undoubtedly this factor was frequently overlooked in cases of purpura associated with rheumatism. Besnier had observed that purpura never resulted from iodine but only from the potassium salt.

**Nævus Pilosus Treated with Solid Carbon Dioxide.** Presented by DR. DITTRICH.

E. B.; Austrian by birth; male; thirty-six years of age. This man presented a pigmented, hairy nævus, two inches long and one and one-half inches in width. He had had solid carbon dioxide applied about five times, which produced an excellent result. The lesion was of the mouse-skin type. One or two more applications would produce a cure and there would be very little deformity.

DR. BLEIMAN said that he had had great difficulty in removing hairs in nævi with the solid carbon dioxide; especially was this true where the hairs were of a very substantial nature. The hairs being deeply embedded, demanded total destruction of the derma which would leave a scar. The speaker referred to a recent case of nævus pilosus on the face, which required three applications of the snow to the same spot before the hairs were annihilated. The scar was not a bad one, but not quite so æsthetic as was seen when but one light application was made.

The patient being a male did not object to the scar. Lanugo hairs, the speaker said, were readily removed.

DR. HUBBARD said that it was possible to destroy hair and to prevent its return by one application of the solid carbon dioxide. He referred to a case of epithelioma of the temporal region that he had treated in this manner. As a result of the first treatment the hair follicles were permanently destroyed. The application was of two minutes' duration with hard pressure after the cone of snow had been dipped in chloroform. The patient was now well and had an area of alopecia the size of a fifty-cent piece.

#### **Eczema Seborrhœicum.** Presented by DR. DITTRICH.

M. B., male, thirteen years of age, a Russian by birth, first came under observation three years before presentation to the Society. At that time he presented a markedly scaly eczema of the seborrhœic type on the scalp, forehead, eyebrows, nose, chest, in the axillæ and genital region. The condition although improved at times, had persisted in spite of careful treatment. When presented, the scalp was covered with crusts and the lesions of the genitals were vegetating in character. The greatest relief had been afforded by applications of a one per cent. salicylated oil.

#### **Lupus Erythematosus Treated with Solid Carbon Dioxide.** Presented by DR. DITTRICH.

M. C.; thirty-three years of age; Russian; salesman. For eight years he had been suffering from lupus erythematosus of the face, nose and cheeks. When he first came under observation he had characteristic lesions on the nose, the left cheek and several small foci on the left ear and in the eyebrow. While the lesions on the nose and ear were quite superficial, the one on the left cheek was of some depth. Solid carbon dioxide was applied to the lesions of the nose and ear at intervals of two to three weeks with slight pressure for thirty-five seconds, while the lesion on the cheek was subjected to an application of two minutes, with firm pressure. When his nose was covered with healthy scar tissue and the lesion on the cheek apparently cured, he disappeared. Six weeks before presentation, he returned with some small new foci on the nose and an extension of the lesion on the cheek.

The following moulages were presented by Dr. Gottheil:

1. Lymphangio-angioma. The patient was presented to the Society in October, 1909.
2. Impetigo Circinata of the hand.
3. Lupus Erythematosus Discoides.

REVIEW  
OF  
DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MacKEE, M.D.  
BACTERIOLOGY AND GENERAL THERAPEUTICS.

By R. C. JAMIESON, M.D., Detroit.

**Hot Air in Dermatological Therapeusis.** R. LUTEMBACHER. *Monde Méd.*, April, 1911.

The author discusses a therapeutic possibility to which very little attention has been paid—the use of superheated air at varying temperatures in the treatment of certain skin affections.

When used at low temperatures (140° F.) as a prolonged douche, it has a pronounced effect on painful manifestations and pruritus, vulvar and anal pruritus being relieved after other methods had failed. At a temperature of 140°-176° F., it produces hyperæmia with consequent stimulation of indolent conditions.

At temperatures of 1200°-1500° F., it is used as a caustic, with many advantages claimed for it over other methods. It is a hæmostatic; its action is superficial as it does not injure the deeper layers, and it is easily controlled to secure the best result with least destruction.

It is also claimed that a smooth, soft scar remains after escharotic effect and that no harmful result is produced on the subjacent healthy tissues.

He considers it an ideal method of treatment for cutaneous epithelioma, tuberculosis verrucosa cutis, certain forms of lupus and rodent ulcer, restricting its use to cases which require surface action without damage to the underlying structures. It is often best employed after parts of the destroyed tissues have been removed, as in severe forms of carcinoma, lupus, etc. Ulcerations are dried up, deodorized and sterilized.

An anæsthetic is required when the air is employed at temperatures of 1200°-1500° F., but the air can be used at any temperature with as much or as little destruction as the operator desires.

A hot-air apparatus is also described, consisting of a current of air compressed by an electric pump, heat being supplied by a rheostat. Both air and temperature are easily under the control of the operator.

**Sterilization of the Skin by a New Iodine Solution.** E. McDONALD. *Med. Rec.*, lxxix, No. 15, p. 675

McDonald takes up the question of skin sterilization by a comparison of the methods of other investigators, stating that after experiments with a number of solutions he finally decided that the best mixture was com-

posed of iodine 2 parts and carbon tetrachloride 98 parts. The advantages claimed for this mixture are: carbon tetrachloride is a fat solvent, which alcohol is not; it is an antiseptic itself and is also very penetrating. It is comparatively non-irritating, but if used repeatedly will cause peeling of the skin of the hands. It can also be used as a hand disinfectant by reducing the iodine and using cold cream afterward.

**Hot Air in the Treatment of Dermatoses.**      P. ESAU. *München. med. Wchschr.*, lviii, No. 16, p. 957.

This therapeutic agent has evidently been given a thorough test by Esau in the treatment of a number of dermatological conditions with excellent results. It was used especially in a number of chronic and acute cases in which all other remedies had failed. This method of treatment produced prompt results in the cases treated, which consisted of acute and chronic eczema, furunculosis and ulcers, but it had also been used by other investigators for surgical and gynecological affections and facial neuralgia.

It is claimed that intolerable itching can be completely stopped, and that all cases can be healed in a much shorter time than by the ordinary means. Psoriasis also is included in these cases, as this method of treatment will influence areas not treated directly. Improvement usually follows after one or two applications and a cure is produced in from six to ten treatments. One case mentioned was that of a girl of eighteen with furunculosis followed by keloid formation, which all disappeared under hot-air treatment.

The hot-air box is used when possible or the hot-air douche, and this method is applicable to a great number of dermatological cases. In weeping and scaling dermatoses, the results obtained are at least equal to those obtained by other methods.

**Iodine Locally in Erysipelas.**      M. FERRARI. *Gaz. d. osp.*, xxxii, No. 37.

The author lays stress upon the method of applying the iodine locally in the treatment of erysipelas, stating that it should be applied first at the periphery of the affected area, then painting the skin toward the centre of the lesion to prevent the spread of the infection outward. He uses a 10 to 12 per cent. tincture of iodine and applies it lightly several times a day, covering the area after it is painted.

**Pellagra Treated with Salvarsan.**      C. M. NICE, J. S. MCLESTER and GASTON TORRANCE. *Jour. Am. Med. Assn.*, lvi, No. 12.  
lvi, No. 12.

The authors make only a preliminary report on three typical cases of pellagra treated by salvarsan. Each case was well marked with der-

matological, intestinal and mental symptoms. .5 to .6 gm. was given each intravenously and improvement began to be noticed in 48 hours. The improvement continued steadily until a normal condition was reached, no deleterious effects being produced in any way.

**Recent Views Concerning the Treatment of Cancer, Based Upon Its Nature.** R. PARK. *Med. Jour.*, Buffalo, lxvi, No. 9, p. 465.

Park discusses at length the various theories that have been brought forward with regard to the ætiology of cancer, stating that some external infectious agent must be at work behind the mystery of cancer and that such a belief would aid rather than hinder further progress. He speaks of the theories advanced by different investigators, Waldeyer, Cohnheim, Ribbert, the Ganemoid or Fusion theory, etc., and also of the rôle played by irritation and trauma in the production of cancer.

Treatment by sera, enzymes, etc., is still in the experimental stage and no conclusions can be drawn with regard to their ultimate value. Arsenic has a selective action for the cancer cell and is of value in certain cases, or in combination with surgery or X-ray treatment. Excision, if radical and thorough, is the ideal theoretical method, provided the lymph spaces can be closed to prevent the extension of the infection, the cautery knife being the best for this purpose.

Caustics are of use, as the reaction set up will block the lymph channels, as is best done by the cautery knife. In this class can be included liquid air and carbon dioxide snow, useful especially in lupus erythematosus, rodent ulcer, small epitheliomata, etc. Other methods employed are: fulguration, cathode rays and X-rays without very satisfactory results. Radium is of value in some cases but is too expensive to come into general use.

**Erythema Multiforme Iris During Course of Typhoid Fever.** PARKER and HAZEN. *Bull. Johns Hopkins Hosp.*, 1911, p. 79.

Erythema multiforme is frequently spoken of as occurring in typhoid, but the writers have been able to find but two instances in which the eruption occurred during the course of the fever.

In a study of 1500 cases of typhoid at the Johns Hopkins Hospital, McCrae notes erythema as occurring fifteen times, urticaria twice, purpura thirty-eight times and a pemphigoid eruption once.

Parker and Hazen report a case of erythema multiforme occurring in the course of typhoid in a boy, a mulatto, 14 years of age. The patient's illness began two days before admission. Two days later the skin showed two varieties of lesions, one, macular and ill defined and varying in size from one-half to three cm. in diameter; the other lesion distinctly annular and from one-half to two cm. in diameter. The centre was red, the



periphery whitish. The edge was very well defined. There was also swelling and redness of the proximal finger joints.

It was later discovered that the patient had suffered every Spring for four years from a similar eruption, save that the lesions were vesicular. Urine and blood examinations showed nothing special. The Widal reaction was negative. The patient was discharged from the hospital in twenty-five days. One week later he was readmitted with a recurrence of fever. This time a definite diagnosis of typhoid was made. The annular lesions present at the time of the first examination persisted up to the time of the discharge from the second stay in the hospital, about two and a half months.

#### A Case of Pemphigus Chronicus Vulgaris of the Oral Cavity and Larynx.

R. A. COFFIN. *Med. and Surg. Jour.*, Boston, April 27, 1911, p. 612.

Coffin believes the case he reports illustrates the need for the laryngologist to familiarize himself with the disease.

In the author's case, the oral cavity, epiglottis, and larynx were extensively involved for four years without accompanying cutaneous manifestations. The diagnosis of pemphigus was made by exclusion.

The patient was a woman fifty-seven years old. Her general health had always been excellent. Six months before the first appearance of the affection in the mouth, the teeth of the upper jaw had been extracted.

The local practitioner treated the patient for herpes and mercurial stomatitis without result. The blebs were first seen under the tongue and upon the sides of the cheeks. They were irregular in shape, varied in size from a pea to a twenty-five-cent-piece and, after a few hours, ruptured, leaving a reddish surface covered with the slightly thickened epithelium which sloughed. There was rapid and great loss of body weight. Treatment was without effect; the patient lived five years.

Two years after the onset of the affection the eyes became involved and films formed until the woman became totally blind. Four years after the appearance of the disease in the mouth, the skin became involved for the first time. For one year before death blebs appeared over the entire body. A lesion upon the foot, which became septic, was the immediate cause of death.

#### Generalized Herpes Zoster. G. NOBL. *Wien. klin. Wchnschr.*, Jan. 5, 1911.

The case recorded affords a possible explanation of the neuritic origin of herpes zoster. The patient was a man seventy-four years old. His previous history was negative. Five days before the outbreak he had light fever and other constitutional symptoms, which increased in

intensity. Severe pain interfered with breathing and extended from the trunk down the leg and into the arm. The eruption accompanying the pain occurred upon the back, abdomen and the flanks in its greatest abundance and showed other scattered lesions on the chest and thighs. Upon the forehead, chin and genito-crural folds some of the lesions became gangrenous, while upon the sides of the thorax some became hæmorrhagic. This regularly distributed outbreak corresponded completely in type to a very marked herpes zoster gangrenosus occurring over the region of the distribution of the third left dorsal nerve. The axillary lymph glands were moderately enlarged. Two days later fresh vesicles appeared upon the right side of the neck and over the right thorax.

In connection with typical vesicles of zoster there also occurred erythematous patches and curious nodular lesions in the midst of an erythematous field.

The tendency has been to regard zoster as an acute specific infection. Nobl, however, maintains that his case gives no ground for such an assumption because prodromal symptoms and initial fever were absent and the symptoms were limited to the region involved by the eruption. In explanation of the generalization of the outbreak, he says it is certain that the causal agent reached the surface by way of the blood vessels and that the exanthem was the result of capillary skin emboli. He goes on to say, further, that there is no longer any doubt, as a result of the careful anatomical investigations of various men, that zoster occurs solely in connection with the nervous system and that the inflammatory and necrotic phenomena manifested upon the skin are not of infectious origin.

As regards idiopathic uncomplicated zoster, it is by no means easy to prove that the poison, acting to produce the nervous disturbance, arises from a bacterial virus whose primary and elective point of attack is exerted especially upon the spinal ganglia, the Gasserian ganglion and possibly upon the peripheral vasomotor centres.

A closer pathogenetic connection between the local and general vesicular eruption will be more easily appreciated if one bears in mind, in these cases, the independence of the trophic disturbances, in the region of the disseminated outbreak, from the intense damage, in the territory of a spinal ganglion.

In defence of his theory that herpes zoster is a vasomotor disturbance, Nobl argues that if one looks upon herpes zoster as a vasomotor phenomenon it is more than hypothetical that, at some time, various nervous centres, unequally sensitive, are stimulated and injured in varying degrees. In support he quotes Eullenburg and Kreibich, who, he says, demonstrated the analogy between neuritic gangrene of the skin, whether artificially or spontaneously produced, and the vasodilator manifestations which are pictured in zoster.

Nobl's explanation of the mechanism is that "The initial inflammatory angioneurotic injury to the vessel wall is to be considered as an

expression of a sympathetic reflex neurosis, which leads first to œdema from dilatation and later to the epithelial necrosis. The irritation of the sympathetic vasodilator centres is distributed through the avenues of sensation whereby the disease of the spinal ganglia occasions the afferent irritation of the reflexes. Thence the excitant acts increasingly upon the spinal column and extends over to the sympathetic ganglia. It is by irritation of the latter that the vasomotor phenomena arise. The return of the phenomena to the source of the irritation explains the intense local appearances in the territory of the skin of the corresponding nerve, whilst the generalization, according to Kreibich's idea, can be satisfactorily explained by the simultaneous extension of the weakened vasomotor irritation along the spinal column to more distant sympathetic centres."

**Vaccine Treatment of Seborrhœa of the Scalp.** SAVILL. *Practitioner*.  
March, 1911, p. 392.

After describing the various diseases which have been grouped under the title of seborrhœa of the scalp, Savill states that not every case of so-called seborrhœa is suitable for vaccine treatment. She apparently considers that only those cases which are characterized by an increased oiliness of the scalp with a gradually increasing loss of hair, that is to say, seborrhœa oleosa, give hope of success.

In the cases of oily seborrhœa, she states, the microbacilli are found in enormous numbers. The prognosis, in such cases, is extremely varied. This type of the disease or true seborrhœa, may be preceded or combined with one or both forms of pityriasis and in such complicated cases the physician of large experience alone can decide upon the correct line of treatment.

The one method of value for the diagnosis and hence, also in a large degree, for the prognosis is an examination of scrapings obtained from the surface of the scalp. Curiously enough, the author says, the examination of the hair roots reveals little of value.

In the cases of so-called dry pityriasis with lustreless and brittle hair, one should not expect to find the microbacillus in large numbers and, therefore, should not expect either cure or amelioration of the hair-fall from the administration of a vaccine of the microbacillus. On the other hand, given a case of hair-fall with much oiliness, without any accompanying scaldiness, one might possibly expect benefit from the administration of such a vaccine.

Dr. Savill then details two cases. The first, a woman of twenty-eight years, had been treated very thoroughly by various methods, for eight years, without success. In August, 1909, a vaccine was made from a culture of the microbacillus obtained from Dr. Sabouraud, of Paris. Four injections were given in doses varying from one to three hundred millions. On August 25th, October 4th, October 19th, and November 1st, steady

decrease in oiliness was reported. Eleven months later the patient wrote that the oily condition had practically disappeared, the hair-fall had ceased and there had been a regrowth of hair.

In the second case, a woman aged twenty-nine, the scalp had been greasy since the age of fifteen. The patient was injected with a vaccine of the microbacillus. A dose of 280 millions was given on April 21st, May 2nd, and May 12th. June 8th, after much improvement, one injection of 100 millions was given. June 9th, the oiliness showed signs of returning. Two further injections were given with temporary improvement, which continued as long as the patient maintained her general health. The failure in this case Dr. Savill attributes not to the vaccine but to the unsatisfactory condition of the general health.

**Erythema Nodosum Following Measles.** JOYNT. *Brit. Med. Jour.*, April 15, 1911.

Joynt reports 9 cases of erythema nodosum occurring in 300 cases of measles. In most of the cases the eruption appeared about ten to fourteen days after the first onset of the measles. In about half, the first symptom was pain in the articulations followed, 24 hours later, by the erythema.

There was no rheumatism nor sore throat associated with the eruption.

**Rumpel-Leedes' Phenomenon in Scarlet Fever.** BENNECKE. *München. med. Wchnschr.*, April 4, 1911.

Leedes and Rumpel had previously reported a method which they had found helpful in the diagnosis of scarlet fever, reporting it positive in nearly 100 per cent. of their cases. When the venous flow was interrupted in the upper arm of a scarlet fever patient, without interfering at all or at least but little with the arterial supply, there appeared at the elbow, after 5 to 20 minutes, hæmorrhages which varied in size from the smallest point to larger suffusions into the skin. Leedes found that the best means of producing these hæmorrhages was by the Riva-Rocci apparatus under a pressure of 45 to 60 mg. of mercury. They can also be produced, however, by winding an elastic bandage around the upper arm, making it moderately tight. After 5 to 10 minutes the bandage is loosened and the skin inspected.

Leedes considers a negative result almost certain evidence against scarlet fever, while a positive result is to be considered only in connection with the other symptoms.

Bennecke comments that this limitation of the significance of a positive result is necessary because similar hæmorrhages have been found in other diseases, for example measles, in relatively high percentages.

It is not yet determined whether the phenomenon is present in the prodromal stage of scarlet fever. It has, however, been observed in a number of cases on the first day of the disease. After the 21st day, the phenomenon appears to be no longer constant, although the majority of

his cases gave a positive result as late as the 42nd day. The latest positive result was obtained on the 102nd day in a patient with hæmorrhagic nephritis. Bennecke calls attention to two points: the hæmorrhages occur only around the elbow; and they disappear rapidly. In none of Bennecke's cases did hæmorrhages appear anywhere upon the arm except in the region of the elbow. He did not encounter large suffusions such as Leedes reported, but only small pinhead and larger flecks. The miliary hæmorrhages often lasted only so long as the constriction of the arm was maintained. The somewhat larger hæmorrhages were never visible for more than two or three days and were unique in that when they disappeared they left no pigmentation behind so far as the eye could detect.

Upon histological examination of a petechial macule Bennecke found an actual extravasate of blood present about the finer capillaries of the upper corium, which he thought was probably due to diapedesis. Between the hæmorrhagic exudate and the epidermis were more or less abundant chromatophores loaded with pigment. Inasmuch as these pigment-bearing cells were not found elsewhere, Bennecke believes it very probable that the Rumpel-Leedes phenomenon occurs upon the site of a previous scarlet fever exanthem. Moreover, in concordance with Rach, it seems to him probable that the hæmorrhages are the direct result of the scarlet fever poison.

Bennecke concludes that his investigations afford further confirmation of Leedes's assertion that a negative result of the test speaks against scarlet fever, but that a positive result does not prove the disease to be scarlet fever since a hæmorrhagic exudate is not peculiar to that affection alone.

**The X-Ray in Treatment.**    J. R. RIDDELL. *Brit. Med. Jour.*, April 29, 1911, p. 985.

In discussing the subject, Riddell first takes up the question of dosage, speaking of the Holz knecht system and the Sabouraud pastille. As these methods are inaccurate and depend upon a change in color, the author has devised another method to measure the ray as follows: He uses a milliamperemeter on the tube circuit, an indicator on the interrupter to record the number of revolutions or interruptions and a self-regulating tube, paying particular attention to the distance of the anti-cathode from the part treated, the penetration of the ray and the amount of current passing through the tube. The amount necessary for one treatment is determined by first comparing with the Holz knecht scale and then varyinig the treatments to meet different requirements.

He has obtained good results in rodent ulcer, keloid, localized psoriasis, lupus vulgaris, tuberculous glands, exophthalmic goitre, alopecia areata (small doses), leukaemia, naevi, deep-seated malignant growths (after excision) and in epilating for ringworm and favus. In almost all



these diseases he prefers to use a good sized dose at long intervals rather than small doses often repeated.

**The Curative Effect of Salvarsan in Cases of Frambœsia.** HENRY ALSTON. *Brit. Med. Jour.*, Nos. 2616 and 2620, pp. 360 and 618.

Three adults and two children were injected with salvarsan with surprising results. To experiment further, he obtained serum from two of the treated cases by blistering, injecting 15 cc. in several adults. The improvement was as rapid as after salvarsan, in some cases beginning sixteen hours after the injection. Serum was obtained from the serum-treated cases and even this secondary serum was very efficacious. He performed three experiments: First—normal serum was injected into cases of yaws with no result; second—serum from salvarsan cases was still effective even after boiling; third—three cases of yaws were treated with their own serum with no result. He suggests that if spirochætæ can be grown that they be injected into a horse, follow it with salvarsan and use the serum experimentally in syphilites.

Sixty-two per cent. of the cases treated with salvarsan were cured, 14 per cent. nearly cured, and 24 per cent. remained stationary, but he believes that if cases were treated with serum every seven or eight days, a cure could be effected in three or four injections.

A goat was injected with .3 gm. of salvarsan and two children fed on its milk. Improvement began on the third day and continued slowly for fourteen days. Other methods were tried; sodium cacodylate, arsacetin, atoxyl, orsudan and soamin, with the result that soamin and orsudan were the only preparations of arsenic besides salvarsan to give any benefit.

**The Treatment of 300 Nævi by Freezing.** J. L. BENCH. *Brit. Med. Jour.*, Feb. 4, 1911, p. 247.

The writer considers carbon dioxide snow superior to radium in the treatment of nævi, except in a few locations, as the action is quicker, more sure, cheaper and the result is equally good. In treating his 300 cases he used carbon dioxide snow on all varieties, capillary, cavernous and pigmented, but preferred liquid air for large port-wine stains. The latter can be used over a large area, requiring from 5 to 10 seconds for an application. He varies the time of treatment and pressure according to the lesion and the tissue in which it is located, varying from 20 seconds for a superficial angioma to 60 seconds for warts. The resulting scars were all smooth and almost invisible. He has also used this method with success in lupus vulgaris, lupus erythematosus, warts, rodent ulcer, old patches of psoriasis and lichen planus, but it must be remembered that neither carbon dioxide snow nor liquid air destroy pathogenic properties nor inhibit the activity of microorganisms.

The Treatment of Rodent Ulcer. GRAHAM LITTLE. *Brit. Med. Jour.*, Jan. 7, 1911, p. 13.

Little takes up the treatment of rodent ulcer by means of carbon dioxide snow and ionization, with a brief comparison with other methods.

He employs the blotting paper mould to collect the snow, making it into a particularly hard stick. In cases with much thickening and crusting he uses a 25 per cent. salicylic acid plaster for three or four days, which removes the crusts and prepares the surface for freezing. Very firm pressure is applied for 20 to 25 seconds, the freezing extending slightly beyond the area affected.

One application may be sufficient, but usually two or three are given at weekly intervals. This method leaves a surprisingly inconspicuous scar.

In the treatment by ionization, a galvanic current of 5 to 10 milliamperes is used with a zinc electrode covered with gauze saturated with zinc sulphate solution attached to the positive pole. A 5 to 7 milliampere current is used for 20 to 30 minutes, repeating the application if necessary in about seven days.

While the X-ray gives excellent results in a large number of cases, freezing or ionization is the best for a certain class of cases which resists the ray. With regard to radium, the effects are too uncertain, while the actual cautery produces too much scarring.

## RADIOTHERAPY.

By FRED WISE, M.D., New York.

Roentgen Rays in Therapeutics: A Suggestion from a Physicist.

J. J. THOMSON, *Arch. Roentg. Ray*, Oct., 1910.

Professor Thomson delivered a lecture before the Section of Electrolgy and Radiology of the British Medical Association, in which he described a discovery of a former pupil of his, Prof. C. G. Barkla, of King's College, London. Prof. Barkla had been experimenting upon the effects produced when the X-rays of ordinary type strike against a metal. "It has long been known that when the Roentgen rays strike against a metal, that metal emits secondary rays. But the essential point about this outgo of secondary Roentgen rays from the surface of the metal was not known until Prof. Barkla made his important discovery. This discovery is that when a piece of metal or any substance—it does not matter whether it is metallic or not, is struck by Roentgen rays, that substance gives out Roentgen rays of a special quality. For example, if we expose iron to Roentgen rays, the iron gives out one particular kind—

a perfectly definite kind—of Roentgen radiation. It does not matter what the quality of the rays are that strike it, the iron gives out a constant kind of Roentgen radiation. If we take another metal, say copper, we find that this also gives out a definite Roentgen radiation, and one that is quite different from that given out by iron. Silver, too, when struck by these rays, emits rays of another and definite quality. And in all these cases the quality of the incident ray—its degree of hardness—does not matter. Whatever it is, the quality of the ray given off by the metal is constant. In this manner we have a definite means of reproducing Roentgen rays of a specific type.”

Prof. Thomson states that for therapeutic purposes, the soft rays are the most useful, and at the same time, the soft rays are the most difficult ones to produce with the ordinary X-ray tube, because the best part of them is absorbed on their way out.

In connection with Prof. Barkla's discovery, it must be borne in mind that in order to enable the metal to give out its particular ray, the incident radiation must be harder than the radiation characteristic of the body. If a metal of high atomic weight like lead, is exposed to a very soft radiation, it will not excite the radiation of the lead. To excite the lead radiation, it is necessary to expose this metal to rays which are harder than the rays given out by the lead; under these conditions the quality of the ray given out by a metal is perfectly definite. The quality of the ray depends upon the metal, and not upon the nature of the ray used to excite it.

The secondary rays vary in their softness depending upon the metal which is used and exposed to the Roentgen rays. Thus if very soft rays are desired, iron is used. The rays produced when silver is exposed, are similar in penetrating power, to the beta-rays of radium, and probably have the same therapeutic effects. The author states that we can thus use these various secondary rays, instead of using different Roentgen bulbs. The same tube can be used to excite different metals and produce rays of different degrees of softness for therapeutic purposes. In connection with these facts, the author cautions against the use of iron and copper shields, as these metals give out the softest rays, which may injure the exposed skin.

#### Recent Experiences in the Treatment of Favus. J. F. HALLS DALLY.

*Arch. Roentg. Ray*, Oct., 1910.

The author gives an account of the work done on cases of favus, treated in a special school in London, for patients suffering with this disease. The school was opened in 1906, since when, 152 cases have been admitted for treatment. X-ray treatment first was given in 1908, and 82 children have had X-ray applications. Of the 152 children treated, 132 were discharged from the school with the disease cured;

one was discharged for observation; no note was made as to the condition on discharge in 7 cases: 11 left for various reasons, some of these having reached the age limit; and one died of pulmonary tuberculosis.

All the cases were controlled by microscopic examinations of the fungus. Only one case showed a recurrence one and one-half years later. Very few cases required a repetition of the X-ray treatment.

During six months, ending June 20, 1909, 50 children were discharged as cured, 24 being admitted; during six months, ending Dec. 31, 1909, 20 children were discharged as cured, 7 cases were admitted and 3 remained under treatment. The school has been the means of practically wiping out the disease from the East End of London; thanks, also, to the barring out of alien immigrants affected with favus.

The X-ray treatment was applied according to Kienböck's method (*Jour. Cutan. Dis.*, April, 1910), published by Adamson in the *Lancet* for May 15, 1909, p. 1378. By this method the scalp is divided into five segments, each of which is epilated in five different exposures, each case requiring on the average about one hour. The hair begins to fall out about eighteen days after the irradiation. In about thirty days after the exposures, the scalp is totally devoid of hair and all traces of the disease have disappeared. In about nine weeks' time, a new growth of hair appears, attaining a length of about one-half inch by the end of three months.

#### BOOK REVIEW.

**Manual of Tropical Medicine.** By AIDO CASTELLANI, M.D. (Florence); Privat-Docent (Naples); Director of the Clinic for Tropical Diseases, Ceylon; Physician, Seamen's Ward, General Hospital, Colombo; Professor of Tropical Medicine and Lecturer on Dermatology, Ceylon Medical College; Member of the Royal Society's Commission on Sleeping Sickness in Uganda, 1902-1903. And ALBERT J. CHALMERS, M.D. (Vic. & Liv.); F. R. C. S. (Eng.); D. P. H. (Cam.); Registrar and Lecturer on Pathology and Animal Parasitology, Ceylon Medical College; Pathologist, General Hospital, Colombo; Holt Fellow University College, Colombo; Holt Fellow University College, Liverpool, 1890; Medical Officer Gold Coast Colony, 1897-1901. London, *Baillière, Tindall & Cox*, 1910.

Former appointments in practical work in different parts of the tropics as well as the positions they are occupying now seem to render the authors of this book particularly well qualified for their task. They profess the book to be the result of the attempt to describe the knowledge which they have found necessary to acquire and use during their work in tropical Africa and Asia. The enormous amount of information, collected from literature and through their personal investigation and experience, shows that this work of the authors was not an easy one. Not so very long ago our knowledge of tropical diseases was very imperfect and fragmentary; widely different conditions were comprised under a common name, often that of a prominent symptom like fever, ulcer, etc. What-

ever other circumstances may have contributed, there can be no doubt that principally the progress of modern bacteriology and the investigation of animal and vegetable parasites in general have rendered the scientific research of tropical diseases so successful. The fact that more than 100 of the 1242 pages of the book are devoted to the biological causes of disease, that is, to animal parasites, makes this evident.

An introductory first part of the book contains chapters on the history of tropical medicine, on tropical climatology, on the effects of tropical climates on man and on incidence of disease in the tropics. The effects of light on the skin (acute and chronic irritation, page 66) are of interest to the dermatologist.

The second part treats of the causation of disease in the tropics; section A of the physical causes, section B of chemical ones: poisons and poisonous weapons, poisonous foods, venomous animals, including reptiles. Section C comprises biological causes: animal and vegetable parasites.

The description of the tropical diseases themselves forms the third part, occupying over 500 pages. Under the headings of the single diseases the authors consider synonyms, definition, history and climatology or geography, ætiology, pathology, morbid anatomy, symptomatology (complications), diagnosis, prognosis, treatment and prophylaxis. In the preface the authors call attention to the importance which they have given to the description of treatment, going into details, which some might think superfluous; but we know by experience, they assert, that these details as regards dosage, modes of administration, etc., are required by the practitioner working in the tropics, who often has no opportunity of consulting books on therapeutics and materia medica.

The reviewer must forego the pleasure of doing full justice to the authors' work in section A (on fevers), particularly to chapters like those on malaria, trypanosomiasis, etc., but to restrict himself to those diseases which are of special interest to the dermatologist, like leprosy, frambœsia, verruca peruviana and pellagra in section B on general diseases. Particular consideration has been given to the means of spreading of leprosy from man to man. The question is left undecided, with the possibility of the infection being carried by some blood-sucking insect not excluded. With Castellani's investigations of frambœsia or yaws the readers of *THE JOURNAL* have become acquainted through his contributions to the Seventh International Congress. The demonstration of a treponema (*treponema pertenue*) as its cause by its presence in the frambœsial lesions and by inoculation experiments in man and in monkeys explains its close relationship but non-identity with syphilis. Pellagra is defined as a chronic disease of unknown causation; the maize and protozoön theories are the only ones to be considered; arsenic in some form is recommended as the best treatment.

In section C systemic diseases are treated. Some of the conditions described in chapter 52 among the affections of the connective tissues, etc., such as dracunculiasis (filariasis) and mycetoma (Madura-foot) are likely to come under the observation of dermatologists. The final chapters, 54 to 60, deal with the various skin diseases. Among the infections with pyogenic cocci we find pemphigus contagiosus more closely related to impetigo than to real pemphigus, Veld sore and other affections. Among the dermatomycoses, the tropical forms of tinea versicolor (flava, alba and nigra) and their fungi, tinea intersecta and tinea imbricata have been described by Castellani in former contributions to the last International Congress. In Dhobie itch we meet an old acquaintance: Hebra's eczema marginatum. Contrary to common experience and opinion in this country the authors consider chrysarobin as a very toxic medicament, liable to cause unpleasant evidences of absorption (in one case after a single application) so that the patient must be watched and the urine regularly examined. Resorcin in tincture of benzoin often was effective. Blastomycosis and sporotrichosis have been observed in Brazil and



in Ceylon. Pinta does not indicate a single disease but a group of closely allied dermatomycoses due to different species of *aspergillus*, *penicillium* and others, characterized by the presence of patches of various color, occurring mostly in tropical America.

Ulcerations (chapter 57) of the skin are extremely common in the tropics and in the past have not been sufficiently differentiated. The most common types are the Oriental sore and the tropical ulcer. The former term (with its numerous synonyms) should be limited to ulcerative processes in which *Leishmania tropica*, a protozoön is found. It begins on the uncovered parts of the body as one or several small pruriginous spots, resembling mosquito bites, changing into papules and gradually (often after months) forming more superficial, indolent or but slightly painful ulcers with jagged edges and irregular fundus. *Ulcus tropicum* is a sloughing ulcer which may take a phagedænic character and spread down to the muscles and bones with hardly any tendency to healing, probably due to the spirochæta Schaudinni. In the treatment of these affections ointments of protargol were found effective. The cosmopolitan ulcerations, as the syphilitic ones, and those due to varicose veins, show the same characters in the tropics as in the temperate zones, except that very often, owing to their being neglected, they may present enormous dimensions, may show secondary infections and may become phagedænic. It is remarkable how quickly ulcers due to varicose veins may heal in rickshaw coolies who have to run and stand for hours, if the patient is kept at rest for some time; whereas in temperate zones the healing of such ulcers is of very long duration. Another disease probably due to a spirochæta is *granuloma inguinale*. Diseases principally characterized by nodules are described in chapter 58 such as *craw-craw* and *dermatitis nodosa rubra*. It is not surprising that *dysidrosis* is not uncommon in the tropics; *cheiro-pompholyx* does not show different character. *Leukoderma* and *albinism* are frequent; various pigmentations occur, but not frequently; tattooing is also considered.

With regard to the cosmopolitan skin diseases, the experience of the authors is somewhat at variance with general ideas. Except those diseases due to intense cold which, however, may occur in high altitudes, all skin diseases met with in temperate zones are also found in the tropics. Owing to the color of the skin of native races, the diagnosis of some of them may be very difficult and this probably accounts for some statements that such common diseases as *lichen planus* and *psoriasis* are absent in the tropics. There is no doubt, however, that some dermatoses are less frequent than in temperate zones. Contrary to statements made by some authorities the authors find that the colored races are more liable to skin diseases than the white race.

An index and a list of authorities occupying almost 80 pages close the book, which is enriched by 373 illustrations in the text and 14 colored plates. It is dedicated to Sir Patrick Munson, the founder of scientific tropical medicine.

This manual will be of great service not only to the physicians practising in the tropics, but also to anybody who looks for information on tropical diseases and for references to the literature of the subject.

H. G. K.

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## SKIN CHANGES IN THE LEUKÆMIAS AND ALLIED CONDITIONS.

By H. H. HAZEN, M.D., Washington, D. C.  
Clinical Instructor of Dermatology, Howard University.

WITHIN the last few years it has been my good fortune to see two cases of lymphatic leukæmia associated with changes in the skin. Upon going over the literature it was found that there were few definite cases of leukæmia cutis and that with the exception of an article by Paltauf, no attempt had been made to group them together, hence it was decided to collect all of the cases upon record in addition to reporting the following.

In November, 1904, I saw, in consultation with my father, the late Dr. D. H. Hazen, a case of chronic lymphatic leukæmia, the description of which follows:

CASE 1. The patient, Mr. M. D., was sixty years of age, was born in Ireland and was a watchman by occupation. The family and past histories were both unimportant. He denied any venereal disease and had never used alcohol. During the summer of 1903 he noticed enlarged glands in the neck, axillæ and groins, together with slight weakness.

An examination showed a well-nourished man, but the lips and mucous membranes were extremely pale. The lungs and heart were normal; the abdomen was distended with fluid; the liver was not palpable, but the spleen extended a full hand's breadth below the costal margin. The glands in the anterior triangles of the neck were much enlarged, some being as much as 6 cm. in length. The axillary and inguinal glands were also markedly enlarged. All were discrete and very hard. From neither history nor examination was there evidence of any involvement of the mediastinal glands. The legs were slightly œdematous; the urine was normal.

One month later a blood examination was made: hæmoglobin 20%; red blood cells, 960,000; white blood cells, 250,000; more than 99% of the leucocytes were of the small lymphocytic order. In going over many fields only two polymorphonuclears were seen; there were no large lymphocytes, no transitionals, no eosinophiles, no mast cells, no myelocytes and no nucleated reds. The red cells were normal in appearance.

The cutaneous changes, while not marked, were interesting. Over the shoul-

ders, chest and back, there was a peculiar bronzing of the skin; the color resembled arsenical pigmentation with the addition of a slight greenish cast. This pigmentation was uniform; the affected surface was all of the same color. The margins slowly merged into the surrounding skin, there being no definite edge. The patient had taken arsenic for only two weeks before I saw him, and the pigmentation was present before the drug was commenced. There had been no X-ray treatment. Nor was there suspicion of chloroma; at no time could any bone changes be made out.

The man grew steadily worse, the liver enlarged, there were frequent attacks of epistaxis, and death took place on Feb. 12, 1905. No autopsy was permitted.

The case, then, is a typical example of severe chronic lymphatic leukemia with pigmentary changes.

On November 30, 1910, Dr. R. T. Holden called me in consultation to see the following case:

CASE 2. Mr. A. S., fifty-seven years of age and a barber by occupation. The family history was unimportant; both parents had died of old age; there were two living children, both of whom were well; two others had died in early infancy from unknown causes. The patient states that with the exception of an attack of scarlet fever when a small boy he had never been sick in his life. He denied venereal diseases and never used either alcohol or tobacco to excess.

The present trouble began late in August, when he was under treatment for varicose veins and a resultant eczema. He first noticed an eruption on the backs of his hands which he thought arose from mosquito bites. However, the lesions persisted and did not itch. A little later he noticed some enlargement of the axillary and cervical glands. Two weeks subsequently the inguinal glands became enlarged and the arms began to swell. About this time the lesions on the hands became vesicular and there were a few similar lesions on other portions of the body. About October 15th, that is, about six weeks before examination, there was an attack of urticaria which lasted only one day. About one week before I saw him the skin eruption had become much more profuse. The appetite had been good and the bowels had been regular. He had lost about thirty pounds in weight and slightly in strength. There had been some pain in the left shoulder and considerable tenderness over the anterior portion of the scalp.

Physical examination showed a well-developed man, who revealed no evidences of loss of weight or strength. The mucous membranes were of good color; the tongue was clean and protruded in the median line. The pupils were equal and reacted to light and accommodation. The pulse was regular, of good force and tension; the vessel wall was not markedly thickened. The apex beat was not seen and was only indistinctly felt in the fifth intercostal space just within the nipple line; there was no evident enlargement to the right. The sounds were clear and of normal relative intensity. The chest was symmetrical except for the glands in the right supraclavicular fossa, which formed a larger mass than those in the left. The antero-posterior diameter was a trifle increased. The respiratory movements were good and equal. Upon percussion the lungs were, perhaps, a trifle hyperresonant throughout. There was some dulness in the top of the axillæ and in the supraclavicular fossæ due to the enlarged glands. The vocal fremitus was more marked at the right base than at the left and was decreased over the entire front. On auscultation there were, in the interscapular area, a few sibilant râles which quickly cleared up and at the right base there were a few crackles at the end of inspiration.

All of the cervical glands were enlarged, varying in size from 2 to 8 cm. in length. In both axillæ there were enormous knots of glands, some being as much as 10 cm. in diameter. The right inguinal glands were slightly enlarged, the left greatly so, one being 10 cm. in length. The epitrochlear glands could not be felt, nor could the submammary. All glands were discrete and hard. The edge of the spleen could just be detected, the liver was not palpable. The tonsils met in the middle line.

The skin over the biceps of both arms was œdematous and thickened, so that the arms were twice their normal size; the left hand and forearm were swollen, œdematous and painful.

The knee jerks were equal and normal.

The face, scalp, arms, hands, and trunk, especially the axillæ, were thickly studded with a vesicular eruption. The vesicles were from 3 to 4 cm. in diameter and were mounted upon inflamed bases. On the face the vesicles were mounted upon papules that were about 1 cm. in diameter. Over the left shoulder blade the vesicles were closely grouped so as to almost suggest a zoster, and in one place they had broken down to form a superficial ulcer. The skin of the face was generally thickened and œdematous; the furrows were exaggerated, so that the general expression was leonine. There was a marked tendency for the vesicles to group; the general picture was that of a wide-spread dermatitis herpetiformis. There was very little itching. On the lower half of the left leg there was an old squamous eczema, and around the knee there were much enlarged varicose veins.

Upon puncture of the ear the blood flowed very freely for a time but was easily checked. The hæmoglobin was 80% by a standardized Sahli instrument. The white blood cells numbered 177,000. A differential count of 1000 cells stained by Jenner's method showed: Polymorphonuclears, 3.3%; eosinophiles, 0.8%; large mononuclears, 22.2%; small mononuclears, 73.4%; transitionals, 0.1%; mast cells, 0.1%; neutrophilic myelocytes, 0.1%. One nucleated red cell was seen. There were very many mononuclears, chiefly of the large variety, in all stages of degeneration. The small mononuclears graded into the large variety until it was impossible to draw a dividing line. All cells larger than a polymorphonuclear were classed as large mononuclears. The red cells showed no changes.

Serum from a fresh blister showed: polymorphonuclears, 28%; eosinophiles, 2%; large mononuclears, 2%; small mononuclears, 68%.

When the patient was seen two days later, the following note was made: "When the vesicles first appear they are about 2 mm. in diameter, later they increase up to about 5 mm. and become umbilicated. At first the serum in them is clear, but later in some it becomes purulent. In various places on the trunk and neck, the total number of places being fifteen, the skin underlying the vesicles has become necrotic and practically gangrenous for an area not exceeding 3 cm. in diameter. To-day the breath is foul."

On December 15th it was noted that the patient was complaining of pain over the splenic area, and that there was some unsteadiness in walking. Examination showed that the knee jerks were normal, and there was no Romberg's sign. There were no more fresh vesicles, many of the old lesions were fading, but those upon the face were becoming distinctly nodular, being about 1 cm. in diameter and  $\frac{1}{2}$  cm. high. The gangrenous areas over the left shoulder blade were larger and showed no signs of healing. A couple of fresh pustules were found upon the hands, an examination of which showed the presence of very numerous staphylococci. Bearing in mind the work of White and Proescher, many examinations of serum from the vesicles were made for spirochætæ, but none was found. Another blood examination was made with the following results: hæmoglobin, 90% (Sahli); white blood cells, 201,000. A differential count of 1,000 cells



showed: polymorphonuclears, 0.9%; eosinophiles, 0.2%; large mononuclears, 18.7%; small mononuclears, 80.0%; transitionals, 0.2%. There were no mast cells, myelocytes, or nucleated reds.

On Dec. 23, 1910, it was noted: "The patient has been taking Fowler's solution up to eight drops, but was obliged by diarrhœa to discontinue it. He has been steadily taking ferric chloride. He complains of having taken cold three days ago and has much cough. On examination, percussion shows an impaired note at the right base, and in the axilla. Auscultation shows crepitant râles at the end of inspiration over the same area. Over an area about 5 cm. in diameter, about 3 cm. to the right of the midline and almost at the extreme base posteriorly, whispered voice sounds are very intense and there is tubular breathing. The edge of the spleen can be just palpated, but the liver reaches to the level of the navel, a full hand's breadth below the costal edge. The glands of the neck are very much smaller, the largest not being over 3 cm. long. The glands of the axillæ and groin are decreased to about two-thirds of their former size. The face is still in the same condition; there is still some œdema, giving rise to a leontine expression and the nodular lesions persist. The necrotic areas of the back are nearly healed, as the result of a balsam of Peru ointment. There are a few fresh papules and pustules over the body. The early lesions, with the exception of those upon the face have disappeared, and there are now only a few scales to mark their former site."

Blood examinations gave the following results: hæmoglobin, 85% (Sabli); red blood cells, 4,214,000; white blood cells, 212,500. A differential count of 1,000 white cells showed: polymorphonuclears, 1.5%; eosinophiles, 0.1%; large mononuclears, 10.0%; small mononuclears, 87.4%; transitional, 0.5%. No mast cells, myelocytes, or nucleated reds were seen.

While I did not again see the patient I am informed by Dr. Holden that upon the next day he developed the signs of cardiac breakdown, that the pulse became small, feeble and irregular, that there was marked orthopnœa and that five days later the patient died with all of the symptoms of a myocardial degeneration. However, in view of the pulmonary findings upon the last examination I cannot help feeling that there may have been a leukæmic infiltration in or about the lungs that was responsible for the death.

The urine of the patient was normal throughout his sickness.

A fresh vesicle was excised soon after I saw the patient. With a hæmatoxylin and eosin stain there were the following findings: 1. The vesicle forms just at the basal layer of the rete. As it spreads, only the upper portion of the rete is involved. 2. In the vesicle there is a very marked "balloon degeneration" of the rete cells; the vesicle is divided into several compartments by the horny layer, portions of which reach into the corium. 3. The rete cells to either side of the vesicle, especially the basal cells, have almost lost their power of staining, so that it is impossible exactly to distinguish the rete from the infiltration of cells just below it. 4. In the papillæ and in the upper portion of the corium, just beneath the vesicle, and to either side of it, there is a marked infiltration, consisting chiefly of lymphocytes, but also of some polymorphonuclears, and many fixed tissue cells. The rete is invaded by the two former to some extent. 5. The polymorphonuclears above described show some fragmentation of nuclei. 6. In the upper portion of the corium there is in places massive infiltration with lymphocytes, somewhat resembling but not so marked as the infiltration of syphilis. 7. There is œdema of the rete to either side of the vesicle, and the interpapillary downgrowths have either been flattened out or have disappeared entirely. 8. The blood vessels of the corium are dilated and are surrounded by lymphocytes. 9. The papillæ are markedly œdematous and are infiltrated with lymphocytes, polymorphonuclears and fixed tissue cells. This pathological



picture is totally different from that seen in dermatitis herpetiformis, but approaches that of vesicular erythema multiforme.

This case is an example of subacute lymphatic leukæmia with an associated vesicular eruption.

The following case is one that was under the observation of Dr. E. R. Strobel of Baltimore, who has kindly furnished me with the following notes:

CASE 3. The patient was a man forty-eight years of age, a native of Clarksburg, West Virginia, who consulted Dr. Strobel on June 23, 1903. The disease had begun eight months before with well-defined, pale-reddish spots on the right leg. These enlarged rather rapidly, and new spots began to appear on the upper arms and chest and on the lumbar region. An examination showed that on the chest there were a few areas that covered almost the whole of the chest and axillæ. These were dark red in color and were infiltrated. On the rest of the body the spots were smaller. The early spots were light red, but deepened in color as they became older and enlarged. They were infiltrated from the first. The palms of the hands were also involved. There were a few minute black spots on the backs of the fingers. Itching was bitterly complained of. There was a general yellowish paleness of the uninvolved portions of the skin. All the superficial glands were enlarged. A provisional diagnosis of pityriasis rubra was made. A blood examination showed the leucocytes to be 80,000 with 40% of small mononuclears. The patient was then lost sight of.

This case is rather difficult to diagnose so far as the blood picture goes. From the dermatologist's standpoint, it probably belongs to the group of erythrodermia perniciosa.

In reviewing the literature of the skin changes associated with the leukæmia group I shall adopt the following classification simply because it is clinically convenient to the dermatologist, not because it is pathologically or hæmatologically accurate: 1. Acute lymphatic leukæmia; 2, chronic lymphatic leukæmia; 3, spleno-myelogenous leukæmia; 4, chloroma; 5, multiple myeloma; 6, lymphodermia perniciosa; 7, mycosis fungoides. The literature has been thoroughly studied and I am confident that very few cases have been missed: for the few references that could not be found in the original wherever possible a satisfactory review has been substituted.

The following are the definite cases of acute or subacute lymphatic leukæmia with cutaneous manifestations:

1. Biesiadecki, in 1876, described the first known case of leukæmia cutis. His patient was a man, aged fifty; the duration of the disease was two months. The spleen, glands and liver were enlarged, and there were nodules over the body. The ratio of red cells to whites was three to two.

2. Hochsinger and Schiff, in 1887, described the following case: The patient was a male, aged eight months. The duration of the disease was three months. The glands, liver and spleen were greatly enlarged. There were nodules over the body. The leucocytes, especially the large mononuclears, were greatly increased.

3. Seelig, in 1895, reported the case of a boy of eleven; the duration of the disease was five weeks. The glands, liver and spleen were enlarged; subcutaneous nodules and petechiæ were observed. The leucocytes were greatly increased, especially the "Markzellen."

Judging from the history of the case it seemed probable that by "Markzellen," Seelig was referring to large mononuclears and not to myelocytes.

4. Steven; 1903; male; age, 19; duration, 9 weeks; enlarged glands, spleen and liver. Nodules in the skin. Hæmoglobin, 15%; reds, 776,000; whites, 491,000; polymorphonuclears, 2.7%; eosinophiles, 4%; large mononuclears, 94.6%; small mononuclears, 1.4%.

5. Hitschmann and Lehdorff; 1903; female; age, 34; duration, 18 weeks. Glands and spleen enlarged; purpura; maculo-papular eruption on abdomen and chest which at first resembled syphilis, but which later became hæmorrhagic. Reds, 2,100,000; whites, 10,500; polymorphonuclears, 4%; eosinophiles, 5.7%; large mononuclears, 45.9%; small mononuclears, 44.4%. A later count gave: reds, 724,000; whites, 32,800; polymorphonuclears and eosinophiles combined, 5%; large mononuclears, 76%; small mononuclears, 10%.

Mracek, in 1904, reported a very remarkable case:

6. Male; age, 67; duration, 2 weeks. The glands, liver and spleen were enlarged. The skin showed bullæ, vesicles, papules, nodules and hæmorrhages. There were 14 red cells to one white. Polymorphonuclears, 1.3%; large mononuclears, 3.5%; small mononuclears, 95.6%.

In editing Mracek's atlas, Stelwagon has misconstrued this case as one of Schoenlein's disease with skin lesions of erythema multiforme.

7. Shattuck; 1904; male; age, 20; duration, 9 weeks. Glands, liver and spleen enlarged. There were present fine papules, almost forming a pityriasis, and petechiæ. Hæmoglobin, 25%; reds, 2,320,000; whites, 51,000; polymorphonuclears, 10%; eosinophiles, 4%; mononuclears, 84%; myelocytes, 2%.

8. Sternberg; 1904; female; age, 51; duration, 7 weeks. Glands, spleen and liver enlarged. Vesicles and pustules on abdomen. Reds, 1,600,000; whites, 30,400; polymorphonuclears, 23.7%; large mononuclears, 48.7%; small mononuclears, 24.3%; myelocytes, 3.3%.

In this same article Sternberg reports the case that I here record under Mracek's name.

9. Schmitter; 1906; male; age, 13; duration, 12 days. Liver and spleen palpable. On the face there were many nodules covered with scabs. White cells, 560,000.

10. Schultze; 1906; male; age, 13; duration, 4 days; enlarged glands and spleen. Hæmorrhagic vesicles and miliary papules. Whites, 560,000; large mononuclears greatly increased.

11. Stengel, in 1906, mentioned a case in which there was a general eruption of white and red nodules in the skin shortly before death, but which vanished in the last twenty-four hours of life, leaving no evidences that could be histologically discovered. The changes were attributed to circulatory conditions.

12. Pappenheim and Hirschfeld; 1908; female; age, 25; duration, 3 weeks; hæmatomata and petechiæ; glands and spleen not felt. Reds, 890,000; whites, 235,000 hæmoglobin, 20%; large mononuclears predominate.

13. Eschbach and Bauer; 1909; female, aged 20; duration, 3 months; glands and spleen enlarged. Large tumor of skin of abdomen, 24 by 25 cm. Reds, 1,780,000; whites, 373,000; lymphocytes, 95%.

In the literature there are the three following cases which are probably examples of acute leukæmia:

1. Kerschbaumer; 1895; male, aged 25; duration, 3 months; enlarged spleen, glands and liver. Tumors of eyelids; white cells greatly increased.

2. Kreibich, in 1908, reported as "pseudo-leukæmia" a case that in all probability was acute leukæmia. The patient was a male of 16 years. The duration was 3 months. The glands and spleen were enlarged. There were nodules in and pigmentation of the skin. Red cells were 2,470,000; white cells, 17,900; polymorphonuclears, 18%; eosinophiles, 2%; large mononuclears, 50%; small mononuclears, 18%; transitionals, 6.5%; myelocytes, 4%.

3. Lavenson, in 1909, reported a case of aleukæmic leukæmia in a male of forty years. The glands and spleen were enlarged; the duration was 4 months. There were present papules and nodules. The hæmoglobin was 75%; red cells, 3,400,000; white cells, 5,400; polymorphonuclears, 75%; large mononuclears, 4%; small mononuclears, 19%. The autopsy showed the characteristic pathological changes of lymphatic leukæmia.

In addition to these cases Fussell, Jopson and Tyler, in a review of the literature of acute leukæmia, report 57 cases, 27 of which showed petechiæ. It will thus be seen that very many cases of acute leukæmia show petechiæ, and that a fair number show nodules. Vesicles, bullæ, papules, maculo-papules, pustules, hæmatomata, and tumors also occur.

When one considers that chronic lymphoid leukæmia is commoner than the acute form, it is rather surprising to find how few instances there are where this disease is accompanied by cutaneous changes. The following are all the cases that a thorough search of the literature disclosed:

1. Neuberger; 1892. The patient was a man who suffered for two years from tumors of the face. The glands and spleen were enlarged. There were 30 red blood cells to 1 white. Both large and small mononuclears were greatly increased.

2. Gollasch; 1892; female; age, 54; glands and spleen enlarged. The skin

showed a diffuse, indurated erythema and also nodules. Red cells, 3,500,000; whites, 140,000; polymorphonuclears, 7%; eosinophiles, 3%; small mononuclears, 90%. The skin picture of this case was very similar to that of lymphodermia perniciosa.

3. Hallopeau and Lafitte; 1898; female; age, 66; duration, 2 years; enlarged glands and spleen, general pruritus and itching, and marked infiltration of skin of mid-line of forehead and nose. Red cells, 4,900,000; whites, 250,000; polymorphonuclears, 8%; eosinophiles, 2%; small mononuclears, 90%.

4. Pincus; 1899, man of 60; duration, 16 months; glands, spleen, and liver enlarged, general redness of skin, face swollen, infiltrated and œdematous, also nodes on face. Hæmoglobin, 45%; red cells, 3,645,000; whites, 225,000; large mononuclears, 8%; small mononuclears, 90.8%.

5. Oertel; 1899. White male; age, 40; duration, 2½ years; glands, liver and spleen enlarged. The skin showed nodules which biopsy proved to consist of lymphocytes. No accurate counts were made, but a smear showed the white blood cells to be greatly increased, with an actual and relative increase of the eosinophiles, large mononuclears, and small mononuclears.

6. Nékam; 1899. Female; age, 41; nodules in the skin of arm, breast and abdomen. Began three years previously as an erythematous eruption. Enlarged glands, spleen, and liver. Hæmoglobin, 40%; red cells, 2,300,000; whites, 650,000; polymorphonuclears, 5%; eosinophiles, 0.5%; large mononuclears, 1.5%; small mononuclears, 91%; myelocytes, 1.7%.

7. Kreibich; 1899. Female; age, 63; duration, 3 years; glands and spleen enlarged; tumors of face, which biopsy proved to be of lymphomatous structure. Hæmoglobin, 50%; red cells, 3,400,000; whites, 120,000; lymphocytes, 92%.

8. Wende; 1901. Male; age, 26; began as a clinical Hodgkin's disease with glandular enlargement and the following blood picture: Hæmoglobin, 88%; red cells, 5,128,000; whites, 4,000; polymorphonuclears, 68%; eosinophiles, 1%; large mononuclears, 4%; small mononuclears, 27%. Six months later there was some diffuse, brown pigment, and nodules were beginning to appear on the body. Hæmoglobin was 40%; reds, 1,936,000; whites, 34,000; polymorphonuclears, 3.4%; eosinophiles, 0.4%; large mononuclears, 1.6%; small mononuclears, 95.3%. More nodules erupted and just before death the blood picture was as follows: Hæmoglobin, 30%; reds, 803,000; whites, 1,600; polymorphonuclears, 10%; eosinophiles, 1%; large mononuclears, 1%; small mononuclears, 88%.

9. Lang; 1902. Male; age, 39; glands, liver and spleen enlarged. Skin showed urticaria and prurigo-like nodules; duration, 2 years. Hæmoglobin, 48%; reds, 4,464,000; whites, 234,000; large mononuclears were greatly increased.

10. Nicolau; 1904. Male, aged 50; patient living at the end of three years. A large granulating tumor of the side of face and smaller nodules of face and scalp, which showed the microscopical structure of lymphomata. Reds, 3,875,000; whites, 155,000; polymorphonuclears, 3.5%; eosinophiles, 1.5%; large mononuclears, 1%; small mononuclears, 94%.

11. Linser; 1906. Male; age, 28; duration, 16 months; glands, liver and spleen enlarged. Began as a clinical Hodgkin's disease and was converted into a leukaemia. The first count showed red cells, 5,440,000; whites, 13,000; polymorphonuclears, 49%; eosinophiles, 5%; large mononuclears, 7%; small mononuclears, 37%. A later count showed reds, 3,700,000; whites, 47,400; polymorphonuclears, 2%; eosinophiles, 1%; large mononuclears, 3%; small mononuclears, 94%. The first skin lesions were pruritus and a few vesicles; later a general erythroderma developed.

12. Dencker, in 1911, reported a case in a woman of 47, who was ill for about a year. The spleen and glands were enlarged and there was extensive infiltration of the skin of the nose and lips. The breasts were converted into



lymphoid tissue. The leucocytes numbered 110,000, of which 82% were small and 6% large mononuclears.

13. Rusch, in 1911, reported a case in a woman of 57. The red blood cells numbered 3,500,000 and the white cells 544,000, with 96% of small mononuclears. The face was nodular, almost resembling leprosy, and there were leukæmic tumors of both the arms and legs and some brown pigmentation. There was an urticaria-like eruption of the trunk.

14. Rusch, in February, 1911, showed before the Wiener dermatologischen Gesellschaft, a case of lymphatic leukæmia which in many respects so closely resembled the last one that one cannot but suspect that it was the same patient. The patient was a female aged 63, with enlarged glands, liver and spleen; the white cells numbered 57,000, of which 83% were small lymphocytes. On the forehead and root of the nose were tuberosities, while the nose was enlarged and contained many telangiectases.

15. Heinrich, in 1911, reported a case in a man of 55, who had noticed skin lesions for about 6 years, and which had been more severe for the last 4 years. All the glands were much swollen; the hæmoglobin was 60%; red cells, 4,000,000; white cells, 150,000, of which 21-3% were polymorphonuclears; 1-3% eosinophiles; and 971-3% lymphocytes. The head and neck showed a reddish-brown, eczematous erythroderma; the chest and abdomen showed a serpiginous, indurated, psoriasiform efflorescence. On the arms and legs were subcutaneous nodules. The patient gave a positive Wassermann.

16. In the *Ergänzungsheft* of the *Dermatologische Zeitschrift*, published in July, 1911, Arndt has carefully considered the lymphoid diseases of the skin, and has given a good bibliography. In addition, he has reported a very interesting case of lymphatic leukæmia. The patient was a man aged 55, who was ill about 18 months. There was a general erythroderma, with intense itching. There was also œdema of the face and of the scrotum. The glands were swollen. The first blood count gave 40,000 leucocytes, of which 49% were small and 11% large lymphocytes. A later count gave 120,000 leucocytes, with 78% of lymphocytes. The patient was not helped by salvarsan.

The following cases are probably examples of chronic lymphatic leukæmia with cutaneous manifestations. In each case, however, there is some slight element of doubt.

1. Trousseau, in 1868, reported a case with general glandular enlargement, and with erythema of the hands, and cited a case of Leubet's with a cachetic pemphigus. The original of this article could not be found, but Paltauf gives a review.

2. Leber, in 1878, reported a case in a man aged 48, who suffered from enlarged glands, spleen, and liver, and tumors of the eyelids. The white blood cells were greatly increased. The duration of the diseases was about 18 months.

3. Fröhlich, in 1893, reported a case in a man, with general glandular enlargement, and tumors of the eyelids and body. There were 26 red blood cells to 1 white. The original of this article could not be found but Schnitter gives a fairly satisfactory review.

4. Winiwarter has reported a case in a boy 19 years of age with an "exquisit myelogener Leukemie," and red tumors of the trunk, chest and abdomen.

5. Pineus, in 1899, reported the following case as one of beginning leukæmia: Male; age, 57; duration, 18 months; glands, liver and spleen enlarged; skin bronzed; lips enlarged; tumors of ears. Hæmoglobin, 95%; red cells, 4,475,000; leucocytes, 50,000; with an absolute and relative increase of lymphocytes.



6. Finger, in 1906, showed a case of lymphatic leukæmia with enlarged glands and spleen, and papules over the body. In the discussion, Weidenfeld mentioned a similar case.

7. Kitagawa, in 1907, reported a case, but neither the original article nor a satisfactory review could be found.

8. Morelle, in 1907, reported another case, the original of which I was unable to find. According to the review, the patient was a man who suffered from an eruption resembling folliculitis of the face and chin, and from enlarged submaxillary glands. Under mercury the eruption disappeared but the glands continued to enlarge. A blood examination showed leukæmia.

9. Bruusgaard, in 1907, reported two cases which Paltauf briefly summarizes. In the first of these the hæmoglobin was 68%; the erythrocytes, 3,450,000; the leucocytes, 48,000, of which 19% were polymorphonuclears, 37% large mononuclears, and 44% small mononuclears.

In the second case the red cells were 1,820,000; the leucocytes, 130,000; polymorphonuclears, 3.1%; eosinophiles, 0; large mononuclears, 96%; small mononuclears, 0.9%. Histological examination of the nodules showed the presence of plasma cells, lymphocytes, and large endothelial cells.

10. Scholtz and Doebel; 1908; male; age, 52; duration, one year; glands enlarged; nodules on body. Hæmoglobin, 70%; reds, 4,500,000; whites, 70,000; polymorphonuclears, 25%; eosinophiles, 1%; small mononuclears, 73%; myelocytes, 0.5%.

It will thus be seen that in chronic lymphatic leukæmia there may be any of the following cutaneous lesions: Pruritus, prurigo, urticaria, bronzing, vesicles, pustules, localized infiltrations, nodules and tumors. The nodules and tumors show a preference for the face.

The literature reveals five cases of skin lesions in splenomyelogenous leukæmia.

1. Hindenberg; 1895. The patient was a woman aged 40, who was ill for one year. There was an enormous spleen. The red cells numbered 3,955,000, and the whites 665,000, with many myelocytes. There was a tumor of the thigh about 6 cm. in diameter.

2. Nékam, in 1899, reported a case in a man aged 30, who had had syphilis nine years previously. There was an enlarged spleen, general pruritus, macules on the abdomen, later becoming confluent and covering the legs. All of these became distinctly papular. There were 537,000 leucocytes; the polymorphonuclears were 38.2%; eosinophiles, 7.5%; large mononuclears, 21.3%; small mononuclears, 7%; myelocytes, 26%.

3. Nékam in the same year reported another case. This was in a woman aged 37. Her glands were slightly enlarged and the spleen much so. There were bluish-red, maculo-papules on the abdomen. The white cells ranged from 360,000 to 500,000. The polymorphonuclears were 20.5%; eosinophiles, 4.2%; large mononuclears, 32.2%; small mononuclears, 5%; myelocytes, 37.1%.

4. Rolleston and Fox, in 1909, reported the most interesting case in this series:

The patient was a woman aged 58, the duration was 11 months. The glands and spleen were enlarged. On the right tibia there was a subperiosteal swelling

that lasted several months and disappeared spontaneously. There were nodules all over the body. Four blood counts were made with little variation. The first count gave: hæmoglobin, 40%; red blood cells, 2,035,000; white cells, 730,000; polymorphonuclears, 50%; eosinophiles, 2%; large mononuclears, 31%; small mononuclears, 4%; mast cells, 0.3%; myelocytes, 13%; and some nucleated reds. A biopsy showed the presence of lymphocytes and polymorphonuclears in a fibrous stratum. No myelocytes were seen. The question arose as to whether this was an example of a "mixed" leukæmia or of an atypical splenomyelogenous case, and it was decided in favor of the latter.

5. Bruusgaard has recently reported another case in a man of 38, in whom the red cells numbered 5,140,000, the leucocytes 410,400, and the hæmoglobin 60%. The polymorphonuclears were 18%, the eosinophiles 6%, large mononuclears 6%, small mononuclears 2%, transitionals 4%, and myelocytes 60%. The spleen was greatly enlarged. The skin lesions consisted of small infiltrated areas in the subcutis. They extended above the level of the skin and were bluish in color. They were found on the trunk and arms. Histologically they consisted largely of myelocytes.

The literature shows ten cases of chloroma with cutaneous lesions.

1. Schmidt, in 1895, reported a case with a green infiltration of the skin surrounding the glands of the neck.

2. Rosenblath, 1902, male, aged 15, duration 2 months, hæmorrhages into the skin.

3. Rosenblath; 1902; male; age, 8; duration, 4 months; nodules of skin.

4. Bramwell; 1902; male; age, 25; duration, 6 months; green nodules of skin.

5. Hitschmann; 1903; male; age, 26; duration, 15 months; green nodules in skin.

6. Dock and Warthin, in 1904, mentioned brown pigmentation of the abdomen and thigh in an elderly man.

7. Pope and Reynolds, in 1907, noticed petechiæ and pustules of the face mounted upon grayish bases. They also isolated a bacillus which they thought might have some causal connection with the disease.

8. Paltauf, in 1909, mentioned a woman who had tumors of the perineum.

9. Jacobaeus; 1909; nodules of body in a man aged 35.

10. Jacobaeus; 1909; swelling of both lips in a man of 57.

Two probable cases of multiple myeloma show cutaneous manifestations.

1. Spiethoff; 1908; male; age, 58; began with redness and itching of the face and hands. Showed an indurated localized erythroderma. White blood cells, 6,936; large mononuclears, 13%; otherwise normal. There were enlarged glands, and a tumor of the sternum, and tumors of several ribs. No Bence-Jones bodies were detected in the urine.

2. Bloch, in 1910, reported a definite case. Female; age, 67; duration, 2 years. Glands, liver, and spleen, and blood findings normal. The skin eruption began as minute papules covered with crusts, and occurred over the trunk and limbs. These enlarged until they became 5 cm. in diameter. The urine showed Bence-Jones bodies in large quantities. The autopsy showed the presence of multiple myeloma with metastases. The skin showed the absence of elastic fibres.

All of the cases that have been reported as erythrodermia perniciosa are not here included, but the most instructive are.

1. Kaposi, in 1885, reported the first case. The patient was a man aged 39. The duration of the disease was 6 months. The following description is quoted from Kaposi's text-book. "It began with the symptoms of a partly diffuse, partly localized, scaling, moist, and intensely itching eczema, which gradually resulted in diffuse, soft, swelling and thickening of the affected parts. Then cutaneous, and subcutaneous, doughy or firm, in part ulcerating nodules developed, the glands and spleen enlarged, with severe affection of the entire organism: leukæmia set in (absolute increase in the number of white blood globules) and was followed by fatal termination. There was general pallor of the skin, and the face, ears, forehead, lips, and integument of the thorax and arms exhibited shapeless nodular thickenings. At the autopsy, the spleen was found to be enlarged fourfold, the marrow of the sternum, vertebræ, metatarsi and long bones was grayish from the excess of leucocytes, and leukæmic nodules were present in the pleuræ and lungs. The nodules in the cutis, which were situated mainly in the adipose layer, were also leukæmic tumors." The leucocytes numbered 125,000.

2. Besnier, in 1888, reported a case in a man aged 76, which began as a furunculosis; later, the skin became scarlet red and there was slight itching. Subsequently tumors and plaques developed and the spleen became palpable. The case was then considered typical of mycosis fungoides. No blood examination was made.

3. Riehl; 1893; male; age, 57; duration, one year; enlarged glands, spleen and liver. There were 24 red blood cells to one white and the small mononuclears were greatly increased. There was a general redness and itching.

4. Nékam; 1899; male; age, 50; enlarged spleen, liver and glands; redness and swelling of whole body; leontiasis of face. Leucocytes, 94,000; polymorphonuclears, 14%; eosinophiles, 7%; large mononuclears, 8%; small mononuclears, 70%.

4. Nicolau; 1904; male; age, 50; duration 18 months. The skin was diffusely and fiery red, was infiltrated and covered with fine scales. There was much pruritus. The glands and spleen were enlarged and there was a relative lymphocytosis. No eosinophilia.

5. Roller-Zipkin; 1909; female; age, 41; duration,  $2\frac{1}{2}$  years. The skin showed a diffuse red erythroderma with marked hyperkeratosis of the feet. The red blood cells were 3,300,000; whites, 44,000; polymorphonuclears, 52%; eosinophiles, 3%; large mononuclears, 28%; small mononuclears, 14%; myelocytes, 2%.

6. Halle, in 1909, showed as an example of Kaposi's disease a man of 54, who had been suffering for one year from redness and swelling of the whole body and leontiasis of the face following a long-standing psoriasis. The glands were enlarged and blood smears showed leukæmia.

7. Arndt, in the same year, reported a somewhat similar case. The patient was a man aged 60, who had had psoriasis since 15. Four weeks before admission, there developed on a general, dry, scaling surface, several small tumors, vesicles and pustules. The liver and glands were swollen. The red cells were 4,250,000; whites, 20,000; the polymorphonuclears numbered 25%, the eosinophiles 9%, the large mononuclears 45%, and the small mononuclears 17%.

In a recent study of mycosis fungoides, Strobel and I found that many cases showed extremely interesting blood changes. Eosinophilia was fairly common and over half of the cases showed a marked increase in the large mononuclears, in the case of Orton and Locke

to 44.3%, of a leucocytosis of 17,000. On account of the blood changes the following cases deserve to be quoted:

1. Danlos' case showed enlarged glands; white cells, 112,500; polymorphonuclears, 31%; eosinophiles, 37%; mononuclears, 32%.

2. Pelagatti's typical case of mycosis fungoides showed 1,140,000 red blood cells; 120,500 whites; polymorphonuclears, 74.7%; eosinophiles, 1%; large mononuclears, 6.4%; small mononuclears, 3%; transitionals, 11%; mast cells, 3.5%; and many myelocytes. This is hardly the typical leukæmia that it was proclaimed to be, but is nevertheless sufficiently interesting.

3. Allgeyer, in 1901, reported a case in a man of 40, with glandular enlargement; white cells, 40,000; eosinophiles, 10%; large mononuclears, 65%.

4. Pardee and Zeit have recently reported a case of mycosis fungoides in a woman aged 57; duration, 3 years; palpable glands. At first the blood examination was normal. At death the ratio of red blood cells to the whites was 20 to 1, with 96% of small lymphocytes. Autopsy showed the typical changes of lymphatic leukæmia.

5. Pasini, in 1907, reported a case of mycosis fungoides in a man of 78. The red cells numbered 2,500,000 and the leucocytes 87,000, of which the polymorphonuclears constituted 43.5%, eosinophiles 1.2%, large mononuclears 33%, small mononuclears, 3.2%, transitionals, 18%, and mast cells 3%.

While most cases of mycosis fungoides do not show such extreme blood pictures as the above, still there are other instances on record of very high counts. While none of the above counts with the exception of Pardee and Zeit's can be classed as typical examples of leukæmia, nevertheless they suggest a relationship. The autopsy findings still further strengthen the view that mycosis fungoides is related to the leukæmias, for on going over the record of cases that had come to autopsy Strobel and I found that cases reported by the following men showed changes in the lymphatic tissue, usually the spleen, glands, and liver, or the lymphatic ring of the mouth or pharynx and occasionally of the long bones: Bowen, Brandweiner, Crull, Hallopeau and Jeanselme, Kaposi, Leredde and Weil, Lenoble, Malherbe and Monier, Mühsam, Paltauf, Riecke, and Roman. Referring to mycosis fungoides, leukæmia and pseudoleukæmia cutis, so conservative a man as Stelwagon states: "I have met with three such puzzling cases in recent years in which the differentiation symptoms were so ill-defined that a positive diagnosis without qualification could scarcely be made; all ended fatally." So both clinically and pathologically mycosis fungoides resembles the leukæmias.

In reality, even at the present day there is much difficulty in defining exactly what is meant by leukæmia, and still more difficulty in drawing its borders. In the text-books one finds acute lymphatic leukæmia, chronic lymphatic leukæmia and splenomyelogenous leukæmia all sharply differentiated, one from the other; the literature,



however, shows that the problem is not so simple. At present it seems fairly well established that:

1. Many cases of acute leukæmia resemble an acute infection (Emerson).

2. One type of leukæmia may change to another (Wolff, Klienberger, Scott).

3. There are upon record a few cases of "mixed leukæmia" (Emerson).

4. A clinical case of Hodgkin's diseases (pseudoleukæmia) may change to lymphatic leukæmia (Wende, Linser).

5. Lymphatic leukæmia may be aleukæmic throughout its entire course (Lavenson), or it may have aleukæmic periods (Emerson, Osler).

6. In acute leukæmia the white blood cells may not be greatly increased (Emerson).

7. The following diseases may give an absolute and relative lymphocytosis, occasionally of extreme degree: tuberculous adenitis (Fabian), pertussis (Cabot) sarcoma and lymphosarcoma (Bushnell, Paltauf), infections (Herz), syphilis of bone (Webster), some cases of secondary syphilis (Hazen, these observations as yet unpublished).

8. Three cases of splenomyelogenous leukæmia have been symptomatically cured by various abdominal operations (Thomas).

9. Myeloma is probably related to chloroma and chloroma is almost certainly closely related to leukæmia (Dock and Warthin).

10. There are all grades of transition from leukæmia, through Sternberg's leukosarcoma to pure sarcoma (Cabot, Banti, Harris).

11. There are some men who regard leukæmia as a symptom and not as a disease *sui generis* (Webster).

Upon the subject of pseudoleukæmia there is even more discord. Under this heading there have been grouped many cases of tuberculosis, Hodgkin's disease, syphilis, lymphosarcoma, sarcomatosis, aleukæmic and acute leukæmias. We still look on the diagnosis of pseudoleukæmia with suspicion. On account of the lack of agreement I have made no attempt to classify or report the cases of pseudoleukæmia cutis.

In dealing with the general subject of the leukæmias, lymphomata, lymphosarcomata and mycosis fungoides, we must consider the views of certain men whose work has made an impression; whether for good or for evil it is yet difficult to say.



Kundrat believes that many so-called lymphomata or lymphocyto-mata are lymphosarcomatous in nature.

He considers that lymphosarcomata arise from lymph glands or from the follicles of a mucous membrane, and though they may long remain localized there, yet in time pass into other lymph glands and follicles, breaking through the capsules and infiltrating the surrounding tissues. In rapidity, infiltration proceeds according to the tissue infiltrated. Distant locations are involved, not by nodules but by infiltrations. The intestinal rather than the internal organs tend to be affected. There is no diffuse infiltration of the liver or spleen. The bone marrow is not affected. Secondary thrombi do occur.

Sternberg has called attention to the fact that sometimes in the leukæmias the hæmopoietic tissues invade and infiltrate the neighboring organs almost in the way that sarcoma does. He has suggested the name "leukosarcoma" for such cases.

Türk includes under the term "lymphomatoses" hyperplasia of the lymphoid tissue due to formative disturbances. He includes acute leukæmia, lymphatic leukæmia, chloroma, pseudoleukæmia, malignant lymphoma, lymphosarcoma and lymphosarcomatosis and perhaps splenic anæmia. The cause is unknown, but is probably some irritant causing stimulation. Pathologically, these growths may remain within their capsules, or may infiltrate surrounding tissues, or may be acute and become generalized. These last two types are malignant. The spleen and lymphatic glands may or may not be involved. The bone marrow may be involved and in rare cases may be the sole site of the disease, but these changes are not essential to the production of a lymphæmia. In one group there is no, or very little change, in the circulating blood: in the second and larger group, lymphocytes are washed out into the blood stream. Any number of them may be present.

Paltauf gives the following classification of the skin lesions:

1. Leukæmia and pseudoleukæmia cutis circumscripta and diffusa. These cases show a hyperplasia of the lymphatic tissue in the various organs, tumors and infiltrations of the skin with lymphocytes, and a blood picture consisting of an absolute and relative, or only a relative increase in the lymphocytes.

2. Leukosarcomatosis cutis. Atypical proliferations of lymphoid tissue, generalized. An increase of pathological, large, mononuclear cells in the blood, with tumors of the skin, and exudative

lesions consisting of the same elements. This group includes chloroma.

3. Lymphosarcomatosis cutis. Atypical, more or less localized proliferations of lymphoid tissue, analogous to leukosarcomatosis, but without the blood changes and without the generalized involvement of the hæmatopoietic organs. The tumors usually consist of large, rarely of small, lymphocytes.

4. Lymphogranulomatosis cutis; granulomatous, infectious-inflammatory affection of the lymphoid tissue, analogous structure of skin nodules with the universal affection of the lymphoid tissue, and the lack of a specific blood picture; there is a great similarity with the aleukæmic form of lymphatic leukæmia. It is certain that diseases that are ætiologically different are grouped under the name of Hodgkin's disease or pseudoleukæmia.

Warthin states: "The majority of the conditions are genetically related and show transition stages. . . . In all cases cells of the lymphocyte type constitute the essential tumor element. . . . From the ordinary forms of sarcoma the lymphocytomata are distinguished by the fact that the latter spread progressively through the lymphatic system and do not set up hæmatogenous metastases.

. . . They may be divided into two great groups: leukæmic and aleukæmic, according to the blood condition. A further classification is that of general and regional lymphocytoma. . . . A clinical classification into benign and malignant lymphocytoma may also be made." Regional lymphocytomata have the following varieties:

1. Symmetrical enlargement of the lachrymal or salivary glands.
2. Mediastinal lymphocytoma.
3. Lymphocytoma of the stomach or intestine and mesenteric glands.
4. Retroperitoneal lymphocytoma.
5. Cervical or axillary lymphocytoma, often unilateral.
6. Lymphocytoma of the pharynx.
7. Lymphocytoma of the skin (mycosis fungoides).

"These are the most common and striking varieties, but any region may be the seat of growth. The writer has seen lymphatic leukæmia develop in three cases of the intestinal type, in two cases of symmetrical enlargement of the lachrymal glands, and in one case of pharyngeal and cervical localization." This same conversion of a lymphoma into a leukæmic condition undoubtedly occurred in the case recently reported by Pardee and Zeit, where a clinical mycosis fungoides became a lymphatic leukæmia.

Adami states: "That just as we recognize that the lymphocytes and what it is convenient to term the leucocytes have distinct origins, so it must be kept in mind that we have distinct if fairly parallel series of blastomatous and blastomatoid conditions, owing their origin to aberrant growth in connection with the tissues giving origin to these two orders of cells; that just as upon analysis we determined that among the overgrowths of fibroid tissue, a series of fibroid tissue, a series of distinct conditions were to be made out from chronic inflammatory hyperplasia to the typical fibroma, and, eventually, to the fibro-sarcoma, so here we have an identical series." Arising from the myeloblasts are the so-called giant-cell sarcoma, the multiple myeloma, myelogenous leukæmia, and chloroma: arising from the lymphoid tissue are chronic hyperplasia, Hodgkin's disease, granulomatous hyperplastic lymphadenitis, lymphoid leukæmia, lymphoma, lymphosarcoma, lymphosarcomatosis, and lastly, probably, splenic anæmia.

It is plainly evident that the last word is yet to be said on the clinical and pathological classification, and also on the ætiology of the various diseases above mentioned. Certain it is that they are all closely related.

From a dermatological standpoint several facts must be pointed out. In the first place there is no hard and fast line between the cases of leukæmia cutis and lymphoderma perniciosa. The cases of Gollasch, Linser, Riehl, Nékam, and Halle show that there are all degrees of transition from one to the other, both hæmatologically and cutaneously. Secondly, Besnier's case turned from a lymphoderma into a typical mycosis fungoides. Thirdly, at least one case of mycosis fungoides has developed into a lymphoid leukæmia.

Clinically, three classes of lesions exist in the leukæmias: first, the nodules and tumors of lymphomatous structure, a localization of the lymphoid tissue formation in the skin; second, those lesions due to a mechanical blocking of the veins or lymphatics, namely, œdema, and third, those lesions that are frequently associated with the disease, possibly in part due to a general toxæmia and in part to a disturbed circulation, namely, papules, macules, vesicles, pustules, purpura, pruritus, lymphoderma, and urticaria.

Histologically, the nodules and tumors consist of lymphocytes, although Bruusgaard has described plasma cells and large endothelioid cells. Cabot and Pincus consider that these growths spring from preëxisting lymphoid tissue in the skin, but Oertel, Crocker and others think that they are infiltrations. In my case the vesicles were

undoubtedly exudative, and the fact that the nodules developed practically from them would seem to show that they had the same origin.

So far as diagnosis goes a blood examination will usually clear up the case, but it must be borne in mind that leukæmia may be aleukæmic throughout its course. Care should be taken not to confuse acute leukæmia with purpura hæmorrhagica. Leprosy, sarcomatosis cutis and Boeck's sarcoid must be distinguished from the nodules associated with chronic leukæmia.

Treatment is unsatisfactory. Where the skin manifestations give no trouble it is probably wise to disregard them unless there is danger of secondary infection occurring through them. If there is severe itching, anti-pruritic lotions or ointments must be used. The X-ray would probably cause the temporary disappearance of the lesions, just as it does in mycosis fungoides. It is not in my province to advise general treatment, suffice it to say that the new arsenical preparations should be given a trial. Dr. Thayer has told me that he has found atoxyl of no value, but I should strongly recommend the use of salvarsan or of sodium cacodylate. My patient died just before the latter was used.

In conclusion, I wish to state that the reason for omitting many cases that have been previously considered as examples of leukæmia cutis is because I considered the cases to be either sarcomatous in nature, or because the diagnosis of leukæmia was absolutely unproven, even though it might be suggestive. The following cases are omitted: those of De Amicis, Chavel, Clairmont, Dubreuilh, Funk, Galliard, Oliver, Philippart, and Rasch.

My thanks are due to Dr. Holden and to Dr. Strobel, both for permission to report their cases and for valuable notes and advice.

#### CONCLUSIONS.

1. There is a group of cutaneous lymphomata and lymphosarcomata, which includes leukæmia and pseudoleukæmia cutis, lymphosarcomatosis cutis, lymphodermia perniciosa, mycosis fungoides, and the cutaneous lesions of chloroma and myeloma which are closely related. The "serum reaction" recently discovered for mycosis fungoides by Joltrain and Brin and described by de Beurmann and Verdun may prove of service in elucidating the relationship.

2. Lymphodermia perniciosa is a condition closely related to both leukæmia cutis and to mycosis fungoides.





Fig. 1.  
Leukæmia.  
Section of a vesicle from Case 2.



Fig. 2.  
Leukæmia.  
A photograph of Case 2.





3. Mycosis fungoides is an aleukæmic lymphomatosis, and may become leukæmic.

4. The cutaneous lesions of leukæmia are probably infiltrations, and are comparable with the internal nodules in splenomyelogenous leukæmia.

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## TREATMENT OF MALIGNANT SYPHILIS.\*

By Howard Morrow, M.D., San Francisco.

THE term malignant syphilis has been loosely applied to various forms of lues which run a severe course. Some of these cases develop ulcers and rupial lesions in the early stages of the infection, and occasionally such cases end fatally. In others there are severe constitutional symptoms, and different forms of syphilides appear, notwithstanding the use of mercury. Another class of cases sometimes spoken of as malignant syphilis, is that seen with progressive destruction of the naso-pharynx, violent headaches, loss in weight, and other severe constitutional symptoms. These are the cases in which treatment with mercury has been unsatisfactory, and a definite prognosis cannot be given.

Through the courtesy of Dr. Flexner, the writer had the opportunity of using salvarsan on a number of patients with malignant syphilis. Two of these will be described somewhat in detail:

CASE 1. A woman, twenty-five years of age, was infected at the time of her marriage, March, 1910. In December, 1910, the eruption consisted of lenticular papules, papulo-pustules and ulcerations. There was a spreading ulcer on the upper lip, twenty ulcers on the lower limbs, with some rupia, general adenitis, mucous patches on the tonsils, pharynx and inner surfaces of the cheeks. There was much loss in weight. Treatment had consisted of mercury by mouth, by inunction and by injection. Iodide of potash was given in the form of "mixed treatment." The lesions increased in number and size while under treatment. The subjective symptoms were severe. The complement fixation reaction was strongly positive.

On January 13, 1911, .4 gm. of salvarsan was given intravenously. On February 1st, all the ulcers had healed and deep stains marked the site of previous lesions. The general health had greatly improved. On February 15th, the complement fixation reaction was still positive. On March 20th, .5 gm. of salvarsan was given intravenously. On May 1st, there were still stains from previous lesions. The patient was apparently in perfect health. The complement fixation reaction was mildly positive.

CASE 2. A man, fifty years of age, had a chancre in February, 1909, followed by marked secondaries. Spirochætae were found in the initial lesion, and in the serum from the secondary eruption. Inunctions and injections of soluble and insoluble salts of mercury were given. These did not control the progress of the disease. Iodide of potash, arsacetin and atoxyl were given, apparently without benefit. In May, 1910, ulceration of the septum and naso-pharynx occurred, together with necrosis of the entire bony septum, hard palate, left turbinates and left anterior and posterior ethmoidal cells. The patient's weight had dropped from 140 to 105 pounds. He had daily a temperature of 101° to

\*Read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 25-27, 1911.



102°, violent headaches, and periostitis developed in both tibiae. On account of these periosteal involvements and general weakness, the patient had difficulty in walking. Notwithstanding the large amount of mercury which had been given, the Wassermann and Noguchi reactions were still positive. The prognosis at this time was grave and little hope could be given. On Oct. 30, 1910, .35 gm. of salvarsan were given below the left scapula, subcutaneously. Two weeks later the patient could walk comfortably, the periosteal tenderness had disappeared, the temperature was normal, there were no headaches, and there was a gain in weight of 5 pounds. Four weeks after the first injection there was a return of the periosteal pains and tenderness; there were arthritic pains in the knees, ankles and shoulders. Some swelling of the hands occurred.

On November 19th, .45 gm. of salvarsan were injected subcutaneously. Considerable pain lasting three days followed this injection. One week later arthritic pains and periosteal tenderness had disappeared, the swelling had left the hands and the patient felt well and walked with ease. At this time Dr. J. F. Smith reported that the nasal ulceration had disappeared. Both the Wassermann and the Noguchi reactions were negative.

On December 10th, three weeks after the last injection, the condition was quite satisfactory. The temperature was normal, there was no pain in the limbs, the patient walked well, and was getting stronger rapidly. The naso-pharynx had remained healed. On Jan. 18, 1911, the complement fixation reaction was again positive. This preceded a return of the headaches due to a small necrosis in the naso-pharynx. On January 24th, .45 gm. of salvarsan were given intravenously. On March 10th, the complement fixation reaction was negative. The weight had increased from 105 pounds to 120 pounds. His general health was good. On May 10th, 14 weeks after the last injection, the complement fixation reaction was negative. Weight 130 lbs. This patient is a physician and is again in active practice.

Judging from the action of salvarsan on the above cases, and on fifty-five milder luetic infections, the following conclusions seem warranted:

Salvarsan controls malignant lues quicker and better than mercury. Severe infections seem to clear up as quickly as milder ones. In naso-pharyngeal necrosis, the action is quick and sure. If given early in lues, alone or in conjunction with mercury, cases of malignant lues will be a clinical rarity.

It is not my desire to speak lightly of mercury, a drug which is satisfactory in controlling the great majority of luetic infections, but to urge the use of salvarsan when there are severe constitutional symptoms, nasal necrosis or resistant lesions of the skin or mucous membranes.

Time has already demonstrated that the majority of cases need more than one injection, and repeating the dose several times seems to be the proper procedure. On account of the frequent return of symptoms and because of the Wassermann reaction remaining positive, or becoming positive after being negative, it seems advisable to give mercury in addition to salvarsan.

## DISCUSSION.

DR. FORBRYCE said that during the past year he had had the opportunity of treating a number of severe and malignant cases of syphilis from various parts of the country, who had come to him because of the introduction of salvarsan in the therapeutics of the disease. Many of these patients had been under the care of careful physicians and had been treated with mercury in various forms with and without iodide of potassium, in spite of which their lesions persisted and recurred. Many of them were extremely cachectic, under weight and in a deplorable condition. After the administration of salvarsan their lesions promptly healed, they gained in weight and were quickly restored to health. He was convinced that salvarsan had its most beneficial effects in malignant syphilis, where the patients had become immune to mercury or were intolerant to this drug. In addition to its remarkable effects in malignant syphilis, it was most beneficial in his opinion in the early stage of the disease, and he now had a series of cases of initial lesions with or without early secondary manifestations, that had been treated by two intravenous injections of salvarsan followed by a mercurial course, in which the Wassermann reaction had remained negative for several months. It was his belief that the administration of salvarsan in two or more doses in the early period of syphilis followed by a mercurial course of several months, offered the patient the best hope for a speedy eradication of the infection. Salvarsan seemed to him as much of a specific in syphilis as quinine was in malaria. Relapses were of frequent occurrence after both remedies and in no way invalidated the claim as to the specific action of the drug on the spirochætæ. It showed, however, that our present methods of administration were not perhaps as definitely standardized as they would be in the near future. If the future did not prove anything more definitely accomplished than the past had done, the introduction of the remedy in the therapeutics of syphilis was well worth while, for it was certainly a most valuable aid in the therapeutics of the disease.

DR. PUSEY said that like Dr. Morrow, he had seen the most striking effects of salvarsan in healing the serious lesions of syphilis. But it seemed to him that we must recast some of our previous knowledge of syphilis if we were to accept all of the cases of so-called malignant syphilis that were being reported in the articles upon salvarsan. All the works on syphilis, Dr. Pusey said, spoke of malignant syphilis as a very rare condition. For many years he had been seeing a large number of the ugliest cases of syphilis in men and women who were intemperate and who belonged to the lowest class of human derelicts and he had not yet seen a case in which the true syphilitic lesions failed to respond to the older specific treatment properly carried out. He knew that such cases occurred, but they were excessively rare; and it seemed to him that we were having now too much malignant syphilis; at least the number of such cases spoken of in the literature at the present time was inconsistent with the number that were met with before the introduction of salvarsan. And he had come to wonder whether the enormous number of cases unamenable to mercury and potassium iodide and rational treatment, which were coming to light in the literature of salvarsan, was not a state of mind rather than a fact.

He did not wish to question the accuracy of Dr. Morrow's report. He believed that his cases were the proper type of cases for "606," but he took this opportunity to defend the established methods of treatment, whose value we knew, in comparison with this new remedy whose results were not what had been claimed for it and whose ultimate results upon the syphilitic no man could yet tell.

DR. POLLITZER said he did not think Dr. Pusey questioned the existence of

what we knew clinically as malignant syphilis. We heard more about these cases since the introduction of salvarsan because the results of the new therapy were so striking that they were often published.

DR. BIDDLE said that in cases of syphilitic destruction of the naso-pharynx, to which Dr. Morrow had referred, there was necrosis of the bone, with fœtor, and this odor could not be gotten rid of until the dead bone was removed. This was not accomplished by salvarsan, which could only hasten the reparative process. In some of his own cases, the separation of the diseased bone had taken weeks, and he did not think it was possible, even with salvarsan, to record such a case as cured within a week, or even two or three or four weeks. In some instances it took months for the necrosed bone to become detached from the surrounding healthy tissue, and no amount of salvarsan would remove the offensive odor so long as the dead bone was there.

DR. FORDYCE said that in spite of the contention made by many that the older methods of treating syphilis were sufficient, our asylums were filled with patients who were treated with mercuric and potassium iodide. If we could prevent the occurrence of such cases with salvarsan, we were doing a good deal. In his own opinion, the older methods of treating syphilis were not sufficient.

DR. ENGMAN said that since the introduction of salvarsan, many cases of malignant syphilis had been drawn from the country districts. Previously, these patients went to the village doctor, who gave them the ordinary treatment, often without result.

The speaker said that in his own experience, cases of malignant syphilis responded beautifully to salvarsan. In every such case where he had used it, the effect of the drug was wonderful.

DR. KLOTZ suggested, as a probable cause of the greater frequency of cases of malignant syphilis now than formerly, was the change in the time of administering mercury. In former years it was the general practice to delay the administration of mercury until the appearance of the secondary symptoms, because we knew that cases where the treatment was begun earlier were apt to be more severe and were more apt to have recurrences. Particularly since the discovery of the spirochæta, however, it was decided that we must begin treatment at once, and in consequence of this, the final results were not so satisfactory. The same general principle held good in malaria. We knew long before the discovery of the plasmodium of malaria that a case of this disease would improve more quickly if quinine was given at a certain time before the malaria paroxysm. It appeared as if the organism which caused the infection were more amenable to the effects of mercury about the time of the appearance of secondary symptoms.

DR. TRIMBLE said he wished to call attention to the work of Slusher and Burchell, of the New York Eye and Ear Infirmary, in reference to the germicidal powers of salvarsan.

These authors had succeeded in growing the staphylococcus in the salvarsan solution. The first experiment was to expose a pure culture of staphylococci to a 1 per cent. solution of salvarsan, for periods of time varying from 5 to 50 minutes; after which the colonies were so numerous that they could not be counted. Again, a pure culture of staphylococci was exposed to 4 cc. of salvarsan solution, prepared by the Lesser method (alkaline solution for intramuscular injection) and after variable periods of time all the slants contained so many colonies that they could not be counted. The same procedure was undertaken with iodipin oil, with the same result.

The work of these investigators went far to prove that the cases of necrosis and so-called "sterile abscesses" were not sterile, and were probably due to faulty antisepsis.

DR. RUGGLES said he did not think that laboratory findings always corres-

ponded with clinical results. It had been shown, for example, that argyrol and other germicides had no effect on certain microörganisms, particularly the gonococcus, in the test tube, yet no one would deny their effect on these organisms in the human body.

The speaker said he was recently called to see a child, five weeks old, suffering from hereditary syphilis with crusts following bullæ all over the body and extremities and with extensive ulcerations on the buttocks. The child was much emaciated, and was rapidly going from bad to worse. After a single injection of salvarsan and the use of mercurial ointment locally, the child made a rapid recovery so far as the skin lesions and general condition were concerned. In this case, the speaker said, the result was little less than wonderful.

Dr. Post said there was no question about the very valuable effects of salvarsan in malignant syphilis. It was in the class of cases that Dr. Morrow had described that the effects of this remedy had been most marked.

Dr. LEVISEUR said that in connection with Dr. Morrow's paper he wished to report a case of malignant syphilis which was interesting on account of the difficulties that surrounded the diagnosis, the long course of treatment that the patient had undergone, both in this country and abroad, and the remarkable improvement that followed the use of salvarsan. The patient was a man who was born in Austria in 1869. He came to America fifteen years later and in 1890 he was treated at St. Luke's Hospital on account of lesions in the throat and an eruption on the nose. At that time he was one of the first patients to receive an injection of Koch's tuberculin. In 1895, he was given specific treatment at the New York Skin and Cancer Hospital and two years later at the Mt. Sinai Hospital. The following year he was treated by Prof. Long in Vienna, receiving ten gray oil injections. During 1898 and 1899, he was given specific treatment and X-ray exposures at Mt. Sinai Hospital. In 1901, he was given mercurial treatment by Prof. Unna in Hamburg. Two years later he took a course of specific treatment, with baths, at Hot Springs, Ark. During 1909 and 1910, he was treated at the Mt. Sinai Hospital and the Montefiore Home.

When Dr. Levisaur saw the patient at the Mt. Sinai Hospital, his nose and upper lip were almost entirely destroyed, also part of his cheek on both sides, he had ulcerations of the uvula and pharyngeal wall, the nasal septum and lower turbinated bone had been destroyed and there was a general keloidal contraction of the naso-pharynx. On the borderline of the scar-formation on the face and mucous membrane of the mouth ulcers continually formed, becoming confluent and resulting in destruction of the soft tissues. Preceding a breakdown of some of the ulcers there was often marked malaise and slight fever. The Wassermann and tuberculin injection-tests were both negative. Two points in the family history were of interest: His mother had suffered from a tumor of the leg resembling a gumma, according to the description. One of his brothers had been treated for syphilis. Blastomycosis and sporotrichosis could be excluded. The diagnosis rested between lupus and inherited syphilis.

After one injection of 0.6 gm. of salvarsan in iodipin, given by the speaker at the Montefiore Home, a remarkable improvement took place. A second injection was made two months later, and at present all the ulcerations were completely healed and the patient was ready for a plastic operation of the upper lip and nose.

Dr. Morrow, in reply to Dr. Pusey, said that in the cases he reported the patients had received tonic and hygienic treatment in addition to the specific medication. Both patients had been given injections and large doses of potassium iodide.

In answer to Dr. Biddle's criticism, the speaker said that his second case, in which there was extensive involvement of the septum and naso-pharynx, with



necrosis of the bony septum and hard palate, had not been reported as cured. The condition, however, had cleared up after the use of salvarsan. The nasopharynx had healed and remained so. The necrotic process became quiescent, and if any dead bone remained, it would, of course, have to be removed mechanically.

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## SOCIETY TRANSACTIONS.

### MIDYEAR CLINICAL MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.\*

Held at the New York Academy of Medicine, December 29, 1910.

SIGMUND POLLITZER, M.D., *Chairman*.

#### Leprosy (Two Cases). Presented by DR. BRONSON.

The first patient was a Chinaman, twenty-six years of age, who had come to this country three years ago. He had first noticed an eruption on the face and extremities about one year before. He presented characteristic leprous nodules of the ears, nose and arms, which showed the presence of lepra bacilli. There was no anæsthesia. The general condition was good.

The second patient was a white man, twenty-nine years old, a native of Barbadoes. He considered himself to be in good health when he first came to this country, six years ago. About two years later his hands began to become thin and weak and he complained of disturbances of sensation extending upon the forearms to the elbows. He had not noticed any abnormal appearance of the skin or ulcers of the heel until nine or ten months ago. He now presented a leonine face, with considerable thickening of the eyebrows and ears, together with red or violaceous discolorations of the face, trunk and extremities. He also showed well-marked interosseous atrophy of the hands, enlarged ulnar nerves, anæsthetic areas of the extremities and perforating ulcers of the heels. Lepra bacilli had been found in the nasal secretions and in the tubercular lesions.

#### Syphilis Treated with Salvarsan (Five Cases). Presented by DR. BRONSON.

CASE 1. The patient was a woman, fifty-three years of age, who had presented on October 1st, a generalized syphilide, and syphilitic ulcers of

\*An informal clinical demonstration given for the American Dermatological Association by the members residing in New York, the meeting being in charge of a committee composed of Dr. Sigmund Pollitzer, Dr. John A. Fordyce, and Dr. Howard Fox.



the calves of the legs. Salvarsan, given a week later, was followed by rapid disappearance of the eruption. The ulcers had not entirely healed but had the appearance of simple indolent ulcerations. The Wassermann reaction became negative one month after the treatment, but three weeks later again became positive.

CASE 2. The patient was a man, thirty years of age, who presented on December 3rd, a general tubercular syphilide and large elevated crustaceous lesions on the chin, thought to be the site of the chancre. An injection of salvarsan was given six days later in the quadratus lumborum muscle and was followed by a rapid subsidence of the eruption. The Wassermann reaction was positive at the end of a week.

CASE 3. The patient was a woman, thirty-eight years of age, who presented on November 10th, a papulo-pustular syphilide, mucous patches of the vulva and a general adenopathy. Treatment with salvarsan two days later was followed by rapid healing of all the lesions, though the Wassermann reaction was still positive eight weeks later.

CASE 4. The patient was a woman, thirty-six years of age, who presented on November 10th, a generalized papulo-pustular syphilide, mucous patches of the vulva and syphilitic angina. An injection of salvarsan given two days later was rapidly followed by disappearance of the lesions. The Wassermann reaction became negative about five weeks after the treatment.

CASE 5. The patient was a man, twenty-seven years old, who presented on December 5th, an extensive ulcerative and rupial syphilide. He had previously been treated with mercury and sodium cacodylate. An injection of salvarsan was followed in one week by rapid healing of the lesions, which at present were entirely well.

**Case for Diagnosis.** Presented by DR. FORDYCE.

The patient was a Russian woman, forty-seven years of age, who had been under observation for several years. The diagnosis rested between syphilis and lupus erythematosus. The lesion began five years ago and involved the nose and contiguous portions of the face. The patient gave no history of syphilis, but showed a positive Wassermann reaction. While under specific treatment, about two and a half years ago, she developed serpiginous lesions of the thighs. These disappeared under further treatment, but the eruption on the face never underwent complete regression, although at time a marked improvement was shown. When presented, the process showed renewed activity. The tip of the nose was red and rough with projecting sebaceous plugs. The progressing border on the side of the nose adjoining the cheeks, was red, raised and slightly scaly, its nodular character being more apparent than real. Under very active anti-syphilitic treatment the Wassermann reaction became negative. It was still negative.

DR. CORLETT said that he was much interested in this case as he himself had had a similar one a few years ago. It was supposed to be a combination of lupus erythematosus and syphilis. This seemed to be the same sort of case *e.g.*, lupus erythematosus plus syphilis. Dr. Fordyce had not found the characteristic histological findings of lupus erythematosus. Was it not possible that the syphilitic influence might modify such changes?

DR. BRONSON considered the case to be essentially one of lupus erythematosus, whether or not the patient had had syphilis.

DR. RAVOGLI said that clinically he would consider the case to be lupus erythematosus. He had a very similar case under treatment. The patient was a rather healthy woman, who had been infected with syphilis. She presented an eruption upon the nose and cheeks, having a butterfly configuration resembling lupus erythematosus. The Wassermann reaction was positive, although the lesion did not improve under anti-syphilitic treatment. The patient was then treated for lupus erythematosus and was improving.

DR. HARTZELL thought it was lupus erythematosus. He had seen cases of undoubted lupus erythematosus in which there was quite as much infiltration as in this case. The positive Wassermann simply proved that the patient had had syphilis. It showed nothing in regard to the present affection.

DR. TRIMBLE said he had experienced some uncertainty in regard to the diagnosis of the case. The lesion on the leg was unmistakably syphilitic. The lesion on the nose, although considered by all the Clinical Assistants at first to be lupus erythematosus, had almost entirely disappeared under "mixed treatment." Although not absolutely gone, it was 90 per cent. better than when the "mixed treatment" was first instituted.

#### **Pemphigus. Presented by DR. FORDYCE.**

The patient was a young woman who had been under observation for about three years, during which time she had had outbreaks of bullous lesions, erythema multiforme and purpura. Large bullæ developed on her hands, toes, or wherever pressure was made. The skin of her hands were atrophic, red, scaling, and in places fissured. Bullæ were constantly forming in the mouth, leaving erosions which made speaking and eating painful. The condition was scarcely distinguishable from pyralism. Her parotid glands, as well as the nodes at the angles of the jaw and in her axillæ were markedly enlarged. On several occasions she developed a generalized erythema multiforme, purpuric on the lower extremities. Her general health had been unimpaired except when she had had exacerbations of the mouth lesions preventing her from taking a sufficient amount of food.

DR. GOTTHEIL said that he had watched this case for a number of months at the City Hospital, and during that time the patient had had several outbreaks of pemphigus. Whenever there was any mental perturbation an attack occurred, and there was a distinct relationship to psychic disturbances. She was very sick during these attacks, having a high temperature, and remaining in bed for weeks at a time. He thought it a clear case of benign pemphigus.

DR. CORLETT said that when the clinical session was held in Chicago a year ago, some marked cases had been shown, which were thought by some to be instances of malingering. He could not agree that all such cases were so included but recognized the type of what might be called a trophoneurosis.

Although the present case had been mentioned as possibly belonging to the former category he thought this could not be maintained, but believed from the clinical picture and from the history that the case belonged to the cutaneous neuroses, numerous examples of which both Van Harlingen and the speaker had reported.

DR. ENGMAN asked if a histological examination of a section had been made, and was answered in the negative.

#### **Bazin's Disease.** Presented by DR. FORDYCE.

The patient was a girl, fourteen years of age, born in this country. Her father died of tuberculosis. Her mother, although she claimed to be well, looked delicate. The patient had had measles and varicella; she was well nourished and complained only of the skin affection. This began on her left leg about five years ago; a year later the right leg became involved. It began as deep-seated cutaneous nodules which gradually extended to the surface and became necrotic in the centre. In addition to the discrete lesions, confluent ulcerated areas and scars were present. She gave a negative Wassermann reaction and a positive Calmette and Moro reaction.

#### **Sarcoid.** Presented by DR. G. H. FOX.

The patient was a Swiss woman, twenty-five years of age, presenting nodular and pigmented lesions upon the face, chest and shoulders. A full report of the case with histological examination was published in *THE JOURNAL* for July, 1911.

DR. GOLDENBERG said that without having seen the case previously, he had made the diagnosis of sarcoid of the Boeck type from a similar case he had seen in Paris. The microscopical examination confirmed this diagnosis.

DR. RAVOGLI said that in the histological preparations he had found a great amount of leucocytic infiltration, chiefly in the subcutaneous tissue. It appeared to him to be a form of tuberculide, a lupus atrophicus.

DR. POLLITZER said that he saw this case a year ago, and from its clinical appearance was opposed to the diagnosis of sarcoid. The case had changed much since then and he understood that this change had taken place under treatment with arsenic and the effect, of course, favored the diagnosis of sarcoid. He had had an opportunity to examine the specimens and the histological picture was perfectly clear. When he first saw the case it was very much more extensive than at present; the plaques were much more prominent, and there was an almost continuous reticulum over the face, an appearance that he was not familiar with in sarcoid.

DR. WILE said that the question had been raised as to how the diagnosis of tuberculosis could be ruled out by the sections. This was answered by the fact that in no part of the sections was there any evidence of caseation necrosis. Except for the nodular character of the infiltrate, there was little else to suggest tuberculosis. The points that led to the diagnosis of sarcoid in addition to the quite characteristic clinical picture, were the following: the presence of discrete cellular nodules (composed of epithelioid cells, small round cells and occasional giant cells) in the entire cutis and extending into the subcutaneous fat. Indica-

tive of sarcoid was the fact that although the infiltrate in places entirely surrounded the adnexa of the skin, in no instance did it invade them, nor apparently interfere with their function. In reply to a question as to whether any cultures had been made for the purpose of demonstrating tubercle bacilli, Dr. Wile said that no such cultures had been made. Sections had been carefully searched for tubercle bacilli, none however being found.

**Serpiginous Lupus Vulgaris.** Presented by DR. G. H. FOX.

The patient was a mulattress, twenty-two years of age. Her parents died of "lung trouble" and she gave a history of having had swellings in the neck and axilla, which had broken down and discharged. She presented a sharply bordered serpiginous eruption upon the face and neck, arm and leg, with a considerable amount of smooth scarring. There were no apple-jelly nodules to be seen. The Wassermann reaction had been negative and the von Pirquet test positive. Ten injections of calomel had produced only a moderate improvement. Guinea-pig inoculation proved the eruption to be tuberculous. (See *Jour. Cutan. Dis.*, 1910, xxvii, p. 173.)

DR. TRIMBLE said that the patient had been treated in the Skin and Cancer Hospital for a number of months, and the opinions had differed very much at first concerning the diagnosis. The lesions on the arm resembled syphilis, while those on the face were like lupus. The diagnosis had, however, been settled by guinea pig inoculations.

**Darier's Disease.** Presented by DR. G. H. FOX.

The patient was an Italian girl, eighteen years of age. She presented a typical eruption of horny papules upon the neck, hand, abdomen and vulva. She had shown considerable improvement under X-ray treatment.

**Peculiar Pigmentation of the Face.** Presented by DR. G. H. FOX.

The patient was a Russian girl, twenty years of age. The eruption consisted of pinpoint to pinhead-sized macules, mostly of a jet-black color, situated about the eyelids, nose, mouth and chin. A few lesions were present upon the backs of the fingers and hands. (See *Jour. Cutan. Dis.*, 1911, xxix, p. 92.)

**Case for Diagnosis.** Presented by DR. HOWARD FOX.

The patient was a German woman, thirty-eight years of age. The eruption had first appeared eighteen years previously. It was confined to the thighs and legs. There had not been any subjective symptoms and she had never received any treatment. The eruption was roughly symmetrical and consisted of yellowish, punctate macules, grouped together to form more or less reticulated patches. There was no apparent scaling. (See *Jour. Cutan. Dis.*, 1911, xxix, p. 181.)

DR. SCHAMBERG said that he was inclined to believe that the case belonged in the same group as a case which he described some years ago in the *British Medical Journal* as a "Peculiar Progressive Pigmentary Disease of the Skin." There was a peculiar yellowish-brownish-red appearance, and on pressure the skin looked distinctly pigmented. The case he had described was that of a boy of fourteen; the lesions were on both legs and arms, and progressed for a number of years without subjective disturbances. While the microscopic sections of the case under consideration suggested lichen planus, in the essential features they resembled those of the case reported. Whereas the clinical picture in each instance exhibited apparent pigmentation, neither Dr. Wile nor he could demonstrate pigment in the sections.

DR. HARTZELL said that there was a lesion on the right thigh of the patient quite typical of lichen planus annularis.

DR. POLLITZER said that the histological picture was typical of lichen planus; clinically the case did not bear the slightest resemblance to parakeratosis variegata, which had been suggested as a diagnosis.

DR. TRIMBLE said the microscopical appearances seemed to be identical with those of ordinary lichen planus.

#### Superficial Cutaneous Tuberculosis. Presented by DR. HOWARD FOX.

The patient was a Swedish woman, twenty-eight years old. The eruption had been first noticed four years previously. It consisted of groups of lesions on the inner aspect of the right thigh and knee, some of which were pigmented macules, others soft, split-pea-sized nodules. There was no evidence of ulceration or scratching. The internal administration of mercury had not produced any effect upon the eruption. A histological examination showed the structure of a cutaneous tuberculosis. (See *Jour. Cut. Dis.*, 1910, xxviii, p. 675.)

DR. HARTZELL said that he was one of those who thought it probably a case of lichen planus, and he was still not convinced either from the examination of the sections, or the clinical features, that it was a case of tuberculosis.

#### Tuberculide. Presented by DR. HOWARD FOX.

The patient was a Russian woman, twenty-five years of age. She gave no family or personal history of tuberculosis. The eruption was first noticed about six years ago upon the hands and arms and three years later upon the buttocks. The lesions were symmetrically situated on the backs of the hands, elbows, forearms and buttocks and thighs. They consisted of discrete papules and papulo-pustules in various stages of evolution, interspersed with punctate scars.

#### Extensive Hairy Nævus Presented by DR. HOWARD FOX.

The patient was a robust Russian girl, six years of age. About half of the entire body was covered with hairy and pigmented lesions. The involvement of the lower two-thirds of the trunk and upper portion of the thighs gave the picture of a pair of swimming trunks. In addition,



there were small pigmented and more or less hairy moles scattered about the face and extremities.

**Keratosis Follicularis Capitis (Two Cases, Father and Daughter).**

Presented by DR. GOLDENBERG.

The first patient (the father) was thirty-one years old, the oldest of six children. His parents and two sisters were free from any disease of the scalp. Three brothers and two cousins had suffered from a similar disease. One of his four children also presented a condition of the scalp possessing the same characteristics. This child (the second patient presented) was a girl two years of age, who had suffered from the condition of the scalp since she was five weeks old. Both of the patients presented an eruption upon the scalp and neck, the rest of the body being free. This consisted of a hyperkeratosis of the follicular openings, covered with small, horny, grayish-white cones, and giving the impression of a nutmeg grater. The hairs had lost their lustre and were dry and broken off a short distance from the point of exit from the scalp. There were only a few hairs that were normal in length. The typical appearance of spindle hairs could not be detected. The patient, however, stated that such hairs had been found during his stay at a dermatological hospital in Vienna where a biopsy had been made. Dr. Goldenberg considered the affection to be a local ichthyosis pilaris and that the condition of the hairs, described as monilothrix, was secondary and due to the presence of the horny masses.

In connection with the presentation of these two patients, a histological preparation was shown from the scalp of one of the patient's brothers (the father's brother). This patient showed a similar follicular keratosis with changes in the hair, consisting of nodular thickenings, a condition described as aplasia pilorum moniliformis. The microscopical section showed horny epithelial masses filling the follicles and occluding their openings. In one follicle there were four hairs spirally coiled upon themselves.

**Adenoma Sebaceum, Mixed Type.** Presented by DR. GOTTHEIL.

The patient was a girl, fifteen years old. The eruption appeared on the face and back between her fourth and fifth years, and had been present ever since. It increased slowly up to her twelfth year, and since then had been getting a little paler. No lesions had ever disappeared. She had menstruated for the past two years. She was somewhat backward mentally. The face was studded with an immense number of minute, rounded or irregular, prominent tumors. Most of them were very minute, pinpoint in size, and yellowish pink. On the cheeks, chin, and sides of the nose more especially, many of them were pinhead-sized or larger, prominent and of a vivid red tint. All of these lesions were soft and solid. On the forehead and neck there were several larger, flat, slightly elevated,

pale, yellowish-brown lesions of the type of senile verrucæ. Scattered all over the trunk were immense numbers of extremely minute tumors, of the faintest yellowish color, and resembling the more minute adenomata of the face. At various places on the trunk were groups of flat, uncolored, very slightly elevated, pea-sized, solid tumors. The patient was so extremely timid and childish that no attempt at a biopsy had been made. She was presented as a case of adenoma sebaceum of mixed type; the reddish lesions of the face and the yellowish body tumors being of the variety of adenoma sebaceum described by Pringle, while the colorless aggregation on the trunk were of the type of Balzer.

**Pityriasis Rubra Pilaris.** Presented by DR. GOTTHEIL.

The patient was a girl, ten years of age. The eruption appeared at the end of the patient's first year, on the cheeks and hands, and two months later began to appear on the body. It had then gradually but slowly increased in extent. The eruption was general, but the face, back and extensor surfaces of the limbs were the areas chiefly affected. The face was irregularly covered with a confluent eruption, composed of pink, hard, papules more or less covered with adherent, yellow, greasy scales. The backs of the hands and arms were irregularly covered with confluent, keratotic masses, on the borders of which, and on the backs of the hands, the characteristic acuminate, horny, perifollicular papules were plainly evident. The skin in places was thickened and reddened, with more or less sebaceous accumulation. The general health was excellent. She had lately been treated with sodium cacodylate and sodium arsenate, hypodermatically, in gradually increasing doses, with a mild tar oil locally. There had been some improvement.

DR. POLLITZER said that he had seen the case before and as he recalled it, there was a rather unusual arrangement of the lesions on the buttocks, a linear distribution which suggested a *nævus*.

**Hydroa Vacciniforme.** Presented by DR. JACKSON.

The patient was a young man, twenty years old, who had had this disease for nine years. He was otherwise in apparent good health. He was of rather sluggish mind, being slow of speech and of comprehension. The disease was always worse in the summer, improving or disappearing in the winter. The patient presented a great number of vaccinia-like scars upon the face, ears and backs of the hands, and a thick crust on the outer edge of each ear. When he came to Dr. Jackson's service last Spring, he showed a great number of thick crusts upon the face, hands and ears, and a large number of scars.

DR. C. J. WHITE said that the distribution of the scars in this case was unusual. He had not noticed any on the fingers, but the disposition on the backs of the hands was quite contrary to his experience with this disease. Atrophic lesions on the face and ears and on the fingers, especially near their tips were not a

great rarity; but for the fingers to be spared and the backs of the hands to be affected was a result not hitherto observed by him.

Dr. G. H. Fox said that he had had an opportunity of studying this case at the Skin and Cancer Hospital for some time. One day a very well-marked case of *acne varioliformis* came to the clinic and the two men were placed side by side. The lesions in the two cases were identical. In the latter case, however, there was no eruption upon the hands and no history of its beginning in early life and occurring chiefly in summer.

Dr. JACKSON said that he had seen another young man in his service with a similar condition, the lesions also occurring on the backs of the hands as well as on the face and ears. In this case the disease was most marked in the winter, being apparently brought on by exposure to cold, damp winds.

Dr. POLLITZER said that it was very unusual to find a case developing in an adult.

#### **Multiple Idiopathic Hæmorrhagic Sarcoma.** Presented by Dr. JACKSON.

The patient was a Russian woman, fifty-two years old. She had had varicose veins and thickened legs for twenty-eight years. Two years ago the present disease developed over the anterior surfaces of both legs. Three months ago lesions appeared upon the backs of the hands. The general health seemed to be good. On both legs from the knee to the back of the foot, but specially over the lower two-thirds, the skin was thickened and of a purplish color. Upon this purple background there was a number of blue, elevated tumors up to a marrow-fat pea in size, or perhaps a little larger. These could be made to disappear entirely with slight pressure, leaving a blue stain. Above these areas, spreading up to the middle of the thighs, was seen a number of oval or round, elevated tumors of brown color, ranging up to one-half inch in diameter. A few similar lesions were present upon the backs of the hands, the largest being on the right hand.

#### **Scleroderma and Atrophoderma.** Presented by Dr. JACKSON.

The patient was a Russian woman, forty-two years old. Many years ago the disease began as scaly pruritic spots on the back of the right foot and left hand. After lasting three years they began to extend up the leg and arm, involving these limbs entirely at the end of two years. When first seen a few years ago the thigh had a mottled appearance. The skin about the knee was red, wrinkled, thinned and atrophic looking. The lower third of the leg was hard and sclerodermatous. The left forearm was diffusely erythematous, while the back of the hand and the wrist had the same appearance as the knee. Lately the other leg had shown signs of being involved in the same diseased process, becoming red, scaly and itchy.

#### **Leucoderma or Chloasma?** Presented by Dr. JACKSON.

The patient was a girl who had been badly sunburned the previous summer. The backs of the hands and wrists became swollen and then

desquamated, leaving a brown pigmentation. The backs of the hands and wrists were light brown in color, but the color was not continuous, having on it islands of white skin. At the edge of the patches there were rounded indentations. On the backs of the feet, and on the upper portion of the arms (that had not been sunburned) there were patches of pigmentation similar to that of the hands. The patient was shown with the question: Was it leucoderma or chloasma?

### **Leukæmia with Skin Lesions Resembling Mycosis Fungoides.**

Presented by DR. LEVISEUR.

The patient was a woman, fifty years of age and born in Russia. The previous history was negative. She had been married thirty-eight years, had had several healthy children and no miscarriages. The menopause occurred eight years ago. The present illness began one and one-half years ago when the skin became red, scaly and extremely itchy. Infiltrated patches appeared later on the breast and forehead. Repeated blood counts showed the picture of a typical leukæmia. Six months ago a transfusion was performed, the operation being preceded by a phlebotomy and the abstraction of a proper amount of the patient's blood. Her condition showed much improvement; the blood count became normal and had remained normal since then. On the skin, however, a number of fungating tumors of larger size appeared. When presented, her skin showed diffuse erythematous infiltrations, particularly above the eyebrows and extending well into the scalp; granulomatous, nodular masses, notably one of the size of a walnut on the lower part of the chin; darkly pigmented spots and tumors of the size of a pea, many of the latter scattered over the buttocks; ulcerations, abrasions, pustules and blebs, evidently of a secondary, accidental character. Almost all the lymph nodes, particularly the cervical, axillary and inguinal were very much enlarged. The tonsils were not enlarged. The liver edge was felt three fingers' breadth below the umbilicus; its surface was smooth. The spleen was enlarged, smooth and was not tender. The urine contained a faint trace of albumin (no Bence-Jones bodies) and a few casts. The temperature was very irregular, at times as high as  $103^{\circ}$  and decidedly septic in character. The nodules removed from the left thigh showed round-cell infiltration similar to that found in leukæmia. It was impossible to make a positive differential diagnosis between round cell sarcoma, mycosis fungoides and leukæmia. Cultures on various media showed no growth.

Treatment: Arsenic and X-rays gave the best results, but the improvement was only temporary.\*

DR. ENGMAN inquired how long the lymphocytosis had lasted.

DR. LEVISEUR replied that it had existed for nearly a year.

\*This patient received an intravenous injection of salvarsan on January 15th. This was followed by a slight improvement in her general condition. She died on May 18th. The result of the post-mortem examination will be reported later.

Dr. RAVOGLI said that the question of mycosis fungoides had been discussed at one of the meetings of the American Dermatological Association. In some cases the disease seemed to be a sarcomatous condition of the skin, in the form of large tumors; in others in the form of small nodules which would soon ulcerate and break down, exuding serum with a disgusting odor. The French authors, especially Brocq, maintained that mycosis fungoides was due to a leukæmic condition. It might be that mycosis fungoides was the cause of leukæmia, or that leukæmia was the cause of mycosis fungoides. One could not deny that this was a case of mycosis fungoides because of the leukæmia. He thought it a true case of the former disease.

Dr. FORDYCE said that this case illustrated very well Paltauf's contention that mycosis fungoides belonged to the leukæmic group of diseases. As far as the skin manifestations were concerned, the patient presented the typical features of mycosis fungoides. In Paltauf's discussion of the disease he referred to patients with the blood changes of leukæmia. It was true that this was not the rule, for in the majority of cases of mycosis fungoides the blood changes were not present.

Dr. WENDE said that he was inclined to classify the interesting case of Dr. Levisœur's, not as leukæmia cutis, but rather as a type of mycosis fungoides, where the skin, directly or indirectly, shared in the affection as it did in other dermatoses such as purpura, eczema and dermatitis of various kinds. The lesions were located upon the surface, while in the pathognomonic lesions of true leukæmia cutis the tumors were situated in the corium and the upper part of the subcutaneous tissue, and were composed of an accumulation of lymphocytes. These varied in size, shape and color.

Dr. MORROW thought the case was one of mycosis fungoides pure and simple. The leukæmic condition which was demonstrated by the researches of Dr. Levisœur and others, would not necessarily overthrow that diagnosis.

Dr. GOLDENBERG said that he adhered to his opinion, expressed on seeing the case, that it corresponded exactly with some other cases of leukæmia described. He formed this opinion not only from the condition of the blood but from the clinical symptoms. He suggested that this case be taken out of the class of mycosis fungoides and be added to that of leukæmia cutis. It was true that the leukæmic picture of the blood changed when there was a suppurative process of the skin. The lymphocytes were used up as quickly as they formed by the supuration in the skin. He would not be surprised to see the patient again develop a leukæmia of the blood. The fact mentioned by one of the speakers, that an eczematous condition was present did not speak at all against leukæmia cutis. The same thing exactly, took place in leukæmia and had been described by Kaposi, twenty-five years ago in his lymphoderma perniciosum.

### Lupus Erythematosus. Presented by Dr. LEVISEUR.

The patient was a woman, twenty-nine years old. The present affection, of two years' duration, started from a "fever sore" on the side of the nose, to which a hot-water bag had been applied. At that time the diagnosis of erysipeloid was made. The face was now almost entirely covered with lesions. There were four bald spots on the scalp: both ears were affected, and on the shoulders there was a number of smaller spots symmetrically arranged. The lesions were healing in the centre, where many showed islands of hyperkeratosis. They spread at the periphery with a pink, slightly raised border, beyond which there was a distinct



erythematous blush. Before entering the hospital she had been treated with mercurial inunctions, and also with X-rays without benefit. The Wassermann test was negative. The tuberculin test was pushed to three milligrams of old tuberculin. There was a marked negative phase of the temperature with general depression and headache. The Holländer treatment was not very successful, on account of the patient's inability to stand much quinine internally or tincture of iodine externally. There were frequent attacks of acute exacerbation accompanied with general malaise. Another feature of the case was the great sensitiveness to all kinds of irritating local remedies. The best results were obtained by the administration of codliver-oil internally and a five to ten per cent. solution of lactic acid externally.

**Erythrodermie Pityriasique en Placques Disséminées.** Presented by Dr. POLLITZER.

The patient was a physician of American birth, fifty-two years old. The disease had made its appearance eighteen or twenty years ago, as a single patch on the outer side of the left thigh. The patch on the thigh when first noticed was 3 or 4 cm. in size; since that time it had increased in area to almost half the circumference of the limb. In the course of four or five years many similar patches had appeared on the trunk and extremities, and then there was little change for many years. During the past year there had been a considerable increase in the number of lesions, mainly on the back and legs. There were no patches on the feet, hands, or face, and relatively few on the anterior portion of the trunk. There had never been any itching or other subjective sensation. The lesions were for the most part circular in outline, though a few were irregular, from 3 to 20 cm. in diameter, yellowish-red to brownish-red in color. Those on the legs had a darker hue, and for the most part resembled simple pigmentations with a scarcely perceptible thickening of the skin and a faint, fine scaling on scratching. A few patches were distinctly but superficially infiltrated, the one on the left calf being covered with coarser scales, somewhat resembling a patch of psoriasis. The patient enjoyed excellent health.

Dr. G. H. Fox said that he had seen this patient about four years ago, but at that time had not been able to make a positive diagnosis. The appearance of the eruption had not changed much since then. From the present clinical condition, he would make a diagnosis of mycosis fungoides, in spite of the fact that there was no itching.

Dr. CORLETT thought the case would eventually be recognized as mycosis fungoides. In this disease it was necessary to depend largely on the clinical picture, as the histological studies were far from uniform. He considered that the case belonged to the premycotic stage.

Dr. TRIMBLE was inclined to believe the case to be one of premycosis and not parapsoriasis, in spite of the history of very little pruritus. One of the

points of diagnosis in cases of parapsoriasis, was slight or almost total absence of infiltration in the lesions; and some of the lesions in this patient were rather markedly infiltrated. It seemed to him that possibly the two conditions might in some way be allied, as several of the cases shown in Scotland and diagnosed as parapsoriasis were later found to be mycosis fungoides.

Dr. VEIEL thought the case to be one of mycosis fungoides, pure and simple. He had observed a similar case for some years, and was in doubt for a long time as to whether or not it was mycosis fungoides. The disease was favorably influenced by a  $\frac{1}{2}$  per cent. pyrogallol ointment.

Dr. PUSEY said that, in view of the fact that the general opinion seemed strongly in favor of mycosis fungoides, he wanted to offer his opinion in support of Dr. Pollitzer's diagnosis that the case was one of parapsoriasis. The view that the case was one of mycosis fungoides was apparently based upon the fact that the eruption consisted of persistent patches looking somewhat like those of mycosis fungoides. Opposed to this view was the extreme duration of the disease and the entire absence of itching, a symptom that was so strikingly tormenting in the premycotic stage of mycosis fungoides. The lesions on the lower part of the body were more distinctly infiltrated than was usual in these cases, but the lesions on the upper part of the body were quite typical of parapsoriasis.

Dr. ENGMAN agreed with the remarks of Dr. Pusey. He would call it a case of parapsoriasis. He called attention to some observations on this type of disease by Drs. Corlett and Schultz. He had also treated two cases recently with very striking results. A year ago Corlett and Schultz reported the histological findings in this class of diseases, in which they found a thickening of the dermal vessels. Three months ago he had had a case which on account of the thickening, he thought might be improved by the internal administration of bichloride of mercury. Although the patient gave no history of syphilis and showed a negative Wassermann reaction, the lesions cleared up remarkably under this remedy. Dr. Mook had also had a similar case, which cleared up rapidly under bichloride. The remarkable effect in these two cases was possibly due to the dissolving of the thickening of the cutaneous vessels.

Dr. RAVOGLI said that in Dr. Mook's case there were no signs of mycosis fungoides at present. Dr. Pollitzer's case might be a premycotic condition, which in three, four or five years might show signs of mycosis fungoides. At the present time he would not make this diagnosis, but preferred to call the disease parakeratosis.

Dr. C. J. WHITE said that the moist, infiltrated lesion on the thigh below the scrotum, unless of secondary or artificial origin, was a very unusual one to find in connection with any form of parapsoriasis.

Dr. POLLITZER said he regretted that so many of his colleagues did not accept his diagnosis. He regarded this case, however, as a typical example of Brocq's disease, and maintained that a duration of nearly twenty years and the absence of the itching alone sufficed to exclude the diagnosis of mycosis fungoides. A histological examination of one of the more infiltrated patches showed the usual picture of *érythrodermie pityriasique en plaques*.

#### Case for Diagnosis. Presented by Dr. POLLITZER.

The patient was a short, strong, healthy, dark-skinned Calabrian laborer, who had been in this country about two years. The skin lesion for which he was shown had been present on the right forehead for ten months. It had neither itched, pained nor caused him any discomfort

and he had sought advice only on account of the disfigurement. He presented a dark-red to brownish-red, swollen area, extending from the right eyebrow upward for about two inches and transversely from the middle line of the forehead to near the hair border in the temporal region. This area was distinctly raised, felt slightly thickened and œdematous, showed slight desquamation in places, and faded gradually into the surrounding healthy skin. It was not attached to the deeper tissues. Below the eyebrow there was a moderate œdema which involved the upper eyelid to a slight extent. At various points in the affected area, especially at its peripheral portions, there were ten or twelve lentil-sized yellowish spots over which the epidermis was soft, so that they were readily pierced by a blunt probe. Smears made from the soft contents of these lesions showed a predominant lymphocyte content; no tubercle or lepra bacilli or other microorganisms were noted. The scar in the middle of the area was the effect of a biopsy. The systemic examination was negative.\*

DR. SCHAMBERG said that it was probably an aberrant case of lupus vulgaris.

DR. RAVOGLI preferred to call it tuberculosis lupoides, because as he understood it lupus began in childhood or in the first ten or twelve years of life. After the twentieth year of life lupus assumed more the form of a tuberculosis which should be called lupoides from its resemblance to lupus. The process was much more rapid and destructive than true lupus which had a slow course.

DR. VEIEL said that it would be necessary to await further developments. It was possibly a form of tuberculosis though it appeared like a circumscribed lues.

DR. WENDE also thought it might be an anomalous type of lupus vulgaris.

#### **Pityriasis Rubra Pilaris.** Presented by DR. POLLITZER.

The case was a severe example of this disease. The patient had been shown at the Sixth International Dermatological Congress in New York. (*Tr. Am. Dermat. Assn.*, i. p. 443.)

#### **Xanthoma Tuberosum Multiplex.** Presented by DR. POLLITZER.

The patient was a Czech, thirty-one years old. Two of the lesions, one on the outer side of the left ankle and one on the posterior side of the left thigh, were said to have been present since childhood. About five years ago a number of small, yellowish patches appeared on both knees, later developing into hemispherical yellow nodules. Similar lesions appeared within a year on the buttocks, the elbows and the hands. During the same time nodules had been noticed on the knuckles, the wrist and in the extensor tendon sheaths of the hands and fingers. During the past few weeks several minute lesions had appeared on the upper arm.

\*April 15, 1911. Wassermann reaction negative. White blood count, 7,000; differential, normal. Biopsy showed the lesion to consist of dense masses of round cells; no Leischman-Donovan bodies. Under simple soothing treatment, there was marked improvement, but the affected area was still slightly swollen and discolored when the patient was lost to further observation.

The case presented a typical picture of xanthoma tuberosum. The firm, round, yellow nodules, the grouping at the joints, knees, elbows, buttocks and hands, the absence of lesions in the face and the freedom from any subjective symptoms were characteristic. The large masses at the elbows, which had attained the size of large walnuts, were noteworthy. The patient had never been jaundiced. His general health was good.

**Case for Diagnosis.** Presented by DR. TRIMBLE.

The patient was a woman, forty-eight years old, who had been shown before the Sixth International Congress of Dermatology. The eruption had existed for twelve years. When she first came under observation the disease was practically universal. The skin was a dusky-red color, infiltrated and profusely scaly. The itching had been intense for several years. There was a certain amount of pigmentation of the forearms, and the soft parts of the hands and fingers were notably enlarged. Under treatment, the disease had disappeared from the trunk, but at the present time the pigmentation of the forearms and the enlargement of the hands and fingers still existed. There was also a papular condition of the legs which seemed to be follicular in character, giving to the hand the feeling of a nutmeg grater. A histological preparation showed the presence of a slight thickening of the epidermis and a hyperkeratosis, although here and there a few nuclei could be distinguished in the horny layer. There was a rather profuse subepidermic infiltration of round and plasma cells. The scaling at present was very slight, due to the fact that the patient was using an oily preparation to control the pruritus.

**Parapsoriasis.** Presented by DR. TRIMBLE.

The patient was a man about forty years of age. The eruption had existed for eight years. It consisted of non-infiltrated, discolored, rather clean-cut, very slightly scaly patches on the buttocks, groins and back. The probable diagnosis was parapsoriasis.

**Fibroma Molluscum.** Presented by DR. TRIMBLE.

The patient was a woman, forty-seven years old, born in Germany. The skin was practically covered with small tumors, varying in size from the head of a match, to a walnut. The color of the majority of the growths was the same as that of the healthy skin. A few presented a bluish tint. The eruption was general, the lesions being more numerous on the trunk and upper extremities. The tumors were soft, and some of them were almost empty when picked up between the thumb and forefinger. This absorption had taken place to such a marked degree in some of the tumors that it gave the appearance and sensation of small collapsed bladders. There were areas of pigmentation scattered over

the body. She did not remember whether these preceded or followed the development of the tumors.

**Fibroma Molluscum.**      Presented by DR. TRIMBLE.

The patient was a girl, nineteen years old, born in the United States. She was a daughter of the previous patient. She had suffered from the usual diseases of childhood and had first menstruated when sixteen years of age. She had been in good health since her fourteenth year, though at present she was somewhat anæmic and delicate in appearance. The eruption consisted of three or four bluish-looking tumors, the size of small marbles, upon the right arm. They did not seem like growths in the skin, but appeared to be deep seated, pushing the epidermis upward. There were also two lesions upon the left forearm, the rest of the body being unaffected. The eruption was first noticed when the patient was sixteen and had slowly increased to the present time.

**Folliculitis Decalvans.**      Presented by DR. WHITEHOUSE.

The patient was a man, twenty-two years old, born in Russia, who had come to this country seven years ago. The eruption began upon the centre of the scalp, five years ago, as a red "pimple," which formed a yellow crust and gradually developed into a patch. This had spread symmetrically, destroying the hair follicles in its progress, until at the present time almost the entire calvarium was denuded of hair. At first glance the surface looked like the scarred area following a favus. No evidence of fungus and no scutula had, however, been observed. The process was still active at the periphery. The perfect and absolute symmetry of the affection was a marked feature.

**Pityriasis Rubra Pilaris.**      Presented by DR. WHITEHOUSE.

The patient was a man, fifty-seven years old, born in the United States. The disease began on the legs about ten years ago and had slowly progressed, with periods of improvement and exacerbation. At present the cutaneous surface, including the scalp, face, palms, and soles and nails was almost universally involved. A year ago he had had a severe relapse, the skin presenting the appearance of an exfoliative dermatitis. At present the entire surface was diffusely red, the diseased area covered with fine scales and showing distinct lichenification. Horny, black-capped, acuminate papules were present on the dorsal surfaces of the fingers and the borders of the hands. There was also a marked keratosis of both palms and soles, a thickened, roughened condition of the nails with horny accumulations beneath the free borders. The patient was well nourished and had always enjoyed good health.



**Lupus Pernio.** Presented by DR. WHITEHOUSE.

The patient was a man, nineteen years of age, born in the United States. He gave no family or personal history of tuberculosis. The eruption had first been noticed last winter, and had entirely disappeared after the onset of cold weather. Eight months before, he had noticed enlarged painless cervical glands on the left side of the neck, the greater number of which had been excised two months later. There was still a large number of hard, enlarged glands around the cicatrix. The glands on the right side of the neck seemed to be entirely normal. The ears and hands were involved two months ago.

**Sarcoma.** Presented by DR. WINFIELD.

The patient was a woman, seventy-five years of age. The first tumor appeared on the left cheek about four years ago. After that the disease spread over the face, ears and neck, the scalp remaining free. The same growth was gradually spreading over the trunk and thighs. The nodules varied in size from a small filbert to a head of a pin. They were translucent and waxy in color. The patient appeared to be in good health. The liver and spleen were not enlarged. There had never been any blood examination. About two years ago a biopsy was made, which showed the presence of a small, round-celled sarcoma. Histological specimens and a photograph taken three years ago were also presented with the patient.

DR. GOLDENBERG said that he would consider this a case of leukæmia cutis.

DR. HARTZELL said that it impressed him as being leukæmia cutis rather than sarcoma. If this were sarcoma it was quite a different lesion from what the surgeons called sarcoma.

**Syphilis Treated with Salvarsan.** Presented by DR. WINFIELD.

The patient was a man, thirty-eight years of age, who had been infected eight years previously. For the past six years the nose and lips had never been entirely free from tertiary lesions. A single injection of .45 gm. of salvarsan was followed by the disappearance of all active lesions.

**Lupus Vulgaris Treated with Solid Carbon Dioxide.** Presented by DR. WINFIELD.

The patient was exhibited to show the lack of benefit from this method of treatment.

**Lupus Vulgaris with Epithelioma.** Presented by DR. WINFIELD.

The disease was on the face and had existed for thirty years. The development of the epithelioma was secondary.

Extensive Tuberculosis of the Skin.      Presented by Dr. WINFIELD.

The patient was a girl, eight years of age. The lesions involved the arms, neck, buttocks and legs. The patches had improved under tuberculin treatment. Photographs showing the improvement under treatment were also exhibited.

Dr. WINFIELD also presented the following cases:

Large Hairy Nævus Removed by Solid Carbon Dioxide.

Carcinoma Lenticulare et Tuberosum.

Tuberculosis Cutis, Occurring on the Forearm of a Woman.

HOWARD FOX, M.D.,

*Secretary of the Committee.*

## REVIEW OF DERMATOLOGY AND SYPHILIS.

Under the Charge of GEORGE M. MAC KEE, M.D.

### INFLAMMATIONS

By HARVEY P. TOWLE, M.D., Boston.

*Ætiological Study of Occupational Inflammations of the Hands.* JACQUET and JOURDANET. *Ann. de dermat. et de syph.*, Jan., 1911.

The writers believe that the subject of occupational inflammations of the hands is worthy of study as, notwithstanding the fact that one element, that of external irritation, is obvious, the exact ætiology of these affections is but vaguely understood. In their paper they give the reasons for their belief that it should be possible to formulate an ætiological theory more accurately and to treat the case more practically.

They base their conclusions upon the observation of 27 unselected cases, some of which were followed for several months and some for one or two years and which included all forms whether due to the profession (or occupation) or to drugs. As a result of their close study they are convinced that the frequency of the association of digestive troubles—and doubtless the importance also—with inflammation of the hands is incontestable.

Deeming the term "digestive trouble" too vague they attempt to define it more closely. Although they were unable to fulfil the ideal conditions in their investigations, nevertheless they were able to state

that, speaking broadly, 22 of their 27 cases showed serious disturbances in digestive hygiene. "Some were alcoholics, some 'caféiques' and others 'polydipsiques,' that is, patients who indulged to excess in so-called hygienic drinks such as hot water, for example. Still others were addicted to the excessive use of spices ('microphages'). Eighteen ate too rapidly ('tachyphages') and some, because of faulty teeth, could not masticate properly. Many combined a number of these faults."

"But," they ask, "is the dyspepsia directly provocative of the dermatitis? May there not be some pathogenic process preceding both and dominating both?" In answer to these queries their clinical experiments were "a veritable experience."

In every case they employed a simplified ataraxic method, as they termed it, with the object of combating the over-excitation of digestion by alimentary excess. This method is susceptible to all grades of variations from a liquid diet through a vegetarian cure to the ordinary regimen.

The simplest formula, the one which is used in the majority of their cases at the Polyclinique, is as follows: (1) Eat with extreme slowness, allowing three-quarters of an hour for each meal. (2) Avoid all condiments except salt. (3) Drink at the most one or two glasses of slightly warmed water. (4) Abstain from fish, shell-fish and pork products, except ham. (5) Neither pure wine nor beer nor liquor nor appetizer of any sort whatever. Bradyphagia, or slow eating, is placed at the head of the list because it is considered first in importance.

Employing this method with variations, they report that with two exceptions, which, as is explained later, did not follow directions, every one of their 27 cases was either greatly improved or cured in from three to seventeen days, the average time being from six to eight days.

Fourteen cases were improved or cured within ten days by the ataraxic regimen combined with local applications and abandonment of occupation.

Four cases were improved or cured in seven days by the ataraxic regimen without local applications but with the avoidance of the irritating occupation.

Nine cases were benefited or cured in twelve days by the ataraxic regimen *without* local treatment and *without* giving up their work. As none of these nine patients had any digestive disturbance whatever. Jacquet and Jourdanet conclude that, in spite of the frequency of eczema in dyspeptics, the fact that these nine cases recovered under the ataraxic regimen alone, without other treatment, proves that the pathogenesis lies not in the dyspepsia but in a corruption of the digestive hygiene. They think it probable, however, that this digestive mal-hygiene is made up of complex elements whose pathogenic action is individual and distinct.

One element, they state, is certainly an exogenous intoxication as from alcohol, coffee, alimentary toxins, etc. A second element is an endogenous intoxication. The two together increase the general cutaneous

irritability and disturb the local cellular life. A third element is rapid eating (tachyphagia) to which they gave especial study. They explain the ill-effects of rapid eating in this way: "The results following rapid eating are essentially these: Tachyphagia increases the functional work of the stomach, by increasing its sensitiveness; by increasing its temperature; by forcing it to contract more vigorously and more frequently; by hindering its evacuation into the intestine; in short, by compelling the stomach to over-work.

On the other hand, bradyphagia (slow eating) has the exactly opposite effect; it allows the gastric digestion to exert its maximum effect with the least effort.

To prove this point of the evil effects of tachyphagia a comparative series of X-ray plates of the stomachs of a tachyphagic and a bradyphagic during digestion are given.

From their clinical experiments, therefore, the writers draw the conclusion that the essential effect of all mal-digestive hygiene is to overburden the stomach. As a sequence there results a functional over-irritation which may, on the one hand, interfere with the function of digestion itself and, on the other hand, act at a distance upon the various organs and tissues which have a more or less direct anatomical connection with the stomach and, among others, upon the skin.

The next result of their clinical experiments was the conclusion that tachyphagia exercises a pathogenic action upon the professional inflammations proportionate to its degree and that bradyphagia exercises a curative effect proportionate to its perfection. The underlying factor in these affections is, therefore, a hyperfunctional irritation whose effect is manifested both in situ and at a distance by a pathogenic irritation of the cutaneous terminations of the sympathetic and cerebro-spinal nerves.

The final aetiological factor of these professional affections is external trauma. "When to the irritation of gastric origin is added the irritation of external trauma, the two irritations converge upon the skin which is, as it were, caught between two fires."

The writers have provisionally formulated as a pathological law that "The conflict or convergence of the external irritation with one or more internal irritations increases, to the very limit of exhaustion, all cellular reactions, the disease and the confusion."

In cases of professional dermatitis the external irritation is multiple, consisting in part of the irritating physical and chemical properties of the agent used in the occupation and in part of the trauma arising from the pruritus.

The hands and forearms are more profoundly affected not because they are areas of least resistance, but rather because they are the seat of the "convergence of irritations," the one coming from within as a result of the hyperexcitation of the stomach and the other coming from

without as a result of trauma arising from the occupation. The local irritation serves as the touch-stone of the reaction upon the internal irritation.

"One can appreciate the interest in this theory since, even in the absence of formal digestive disturbances, one may, and should suspect in these cases a gastro-intestinal irritation whose suppression will remove the dermatosis even though contact with the harmful substances of the occupation be allowed to continue."

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#### BOOK REVIEWS.

**Die Wassermannsche Reaktion mit besonderer Berücksichtigung ihrer klinischen Verwertbarkeit.** Von Priv.-Doz. DR. HARALD BOAS, Assistent am Rudolf Berghs-Hospital für venerische Krankheiten in Kopenhagen. Mit einem Vorwort von Geheimrat PROF. DR. A. WASSERMANN. Berlin, S. Karger, 1911, pp. 186.

In the present work of 141 pages (of text) Harald Boas has written an interesting and extremely readable exposition of the Wassermann reaction. At the end of most of the chapters the author gives a short summary, while the last chapter is a general resumé of the entire subject. He quotes freely from the works of others and gives in some detail the results of his own extensive observations (in nearly 3,000 cases). That the laboratory work of Boas is absolutely reliable would appear from its having been performed under the supervision of Madsen, a fact to which Geheimrat Wassermann calls attention in the preface.

The book opens with an historical sketch and a description of the technique of the Wassermann reaction. A short account is also given of the various modifications of the original method as well as the various precipitation tests. The Wassermann reaction in non-specific diseases is then discussed, mention being made of the well-known fact that a positive reaction is frequently obtained in leprosy and at times in scarlatina and malaria, etc. In his own observations, in 1064 control cases representing over 90 non-specific diseases, the writer found only one positive reaction. He concludes from this that a positive reaction should be considered diagnostic of syphilis.

The writer then discusses the action of the Wassermann test in the various forms of syphilis and parasyphilitic affections. In the case of suspected primary lesions, a negative reaction does not rule out the diagnosis of syphilis. In untreated cases of secondary syphilis the reaction is practically constant. It may be negative in relapses when the patient had previously been treated. It is decidedly stronger in untreated than in treated cases of secondary cases. In the tertiary manifestations of the disease, the reaction is also constant in cases that had previously received no treatment. When treatment had previously been given the reaction may prove negative. It is also stronger in untreated than in treated cases. In the latent stages a positive reaction is of diagnostic value, whereas a negative reaction has no great prognostic or therapeutic importance. In untreated cases of tabes a positive reaction is constant. In treated cases, a positive reaction is alone of diagnostic value. In paresis a positive reaction with the serum is a constant finding in the cerebrospinal fluid in 91 per cent. of the cases. The reaction in congenital syphilis as shown by quantitative titration seems to be stronger than in all other forms of the disease. A positive reaction in a child at birth does not mean positive syphilis as this may be due



to the presence of inhibiting substances from the mother that have passed through the placenta. In manifest congenital syphilis during the first year a positive reaction is constantly obtained.

The reaction is influenced in almost all cases by anti-syphilitic treatment. A reaction can become positive where it was formerly negative in spite of an anti-syphilitic therapy, not because of it. The Wassermann reaction should be considered as a symptom of syphilis, and indeed the most constant symptom of all. It is a valuable clinical sign which should not be regarded as a wonderful method capable of solving all the problems of syphilis. To make the proper use of the test one should know under what conditions a positive reaction is constant and when it can fail, and not to place too much reliance upon a negative reaction. An appendix consisting of an excellent bibliography of over 950 selected references adds to the value of the book.

H. F.

**Education in Sexual Physiology and Hygiene.** By DR. PHILIP ZENNER. Cincinnati, 1910. *The Robert Clarke Co.*

The scope of this little book may be gathered from the author's concluding remarks in the preface: "The highest aim of this book is to help create a public sentiment which will demand teaching in sexual physiology and hygiene. But this is not enough. It is but a wholesome instinct which dreads this teaching unless it be properly done. So, if there be a public demand for such teaching, it should demand, also, that the teacher and the teaching be the best."

Dr. Zenner would disseminate sexual truths among adolescent school children through the medium of tactful physicians of both sexes, who would address themselves to boys and girls respectively. In his opening address, the author quotes substantially the text of four short addresses he had delivered to the male pupils of a Cincinnati school. In these talks, he elucidates, in simple language, the process of reproduction in flowers, fishes and birds, and impresses his auditors with the necessity and desirability of cleanliness in thought and habit.

In the succeeding chapters, addresses in the same tenor are made to college men, and the subject is broadened to include warnings against infection with the venereal diseases and syphilis.

The whole is a praiseworthy effort toward the solution of one of the most serious problems of social life. A book of this kind is of course intended primarily for lay educators, and is therefore a step in the right direction. Such criticism as it would evoke from the physician, would be directed at Dr. Zenner's initial lecture to the younger pupils. In children approaching the period of adolescence, the functions of the reproductive organs excite curiosity, and at this period the indulgence in masturbation is extremely common. We do not think that Dr. Zenner's veiled allusions to these boys, would be as productive of good results as would a frank discussion of the subjects, to boys between fourteen and seventeen years of age. Our experience has been that a young hopeful, on entering college is already worldly wise, and hence a thorough exhibition of sexual hygiene should be given him, before he experiments upon himself.

The book is well written and is recommended to educators who have given their time and thought to this highly important subject.

F. W.

#### NOTICE

The Seventh International Congress of Dermatology has been postponed until the middle of April, 1912.

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## THE MOTTLED CHIN IN SYPHILIS, AND OTHER DERMATOLOGICAL OBSERVATIONS.\*

By WILLIAM B. TRIMBLE, M.D.

Lecturer on Diseases of the Skin, New York University, Chief of the College Clinic, Assistant at the New York Skin and Cancer Hospital.

**T**AKING the cue from the writers of fiction, who frequently mass a number of short tales into one small volume, this paper is presented as a group of observations; but unlike the purveyor of fiction, it might with propriety be labeled a collection of short facts and not short stories.

It is a somewhat heterogeneous group, touching on diagnosis here and therapeutics there; but it all pertains to dermatology, and if in this case variety is like spice, it may possibly act as a mild stimulant.

These notes and annotations were made in two of New York's dermatological clinics. They are both large, and furnish ample material for the study of cutaneous manifestations of disease. During the ten years or more of continued attendance by the writer, various observations and several points have become apparent that are not mentioned in the literature; some of these are of more importance than others, but all have some weight in the study of dermatology. Six have been selected as of enough importance to record, and so far as the writer's knowledge extends, none of them has been noticed or mentioned before. That considered of most consequence is described first.

### THE MOTTLED CHIN IN SYPHILIS.

This name seems the most appropriate for this condition, as mottled means "marked with spots of different color or shades of

\*Read before the 35th Annual Meeting of the American Dermatological Association, Boston, Mass., May 23-25, 1911.

color." In a number of cases of early syphilis, that is, during the first few weeks or perhaps months of the disease, the *chin* is marked with a macular, variegated eruption, which is characteristic, and the same in every case in which it is present, varying only in degree. This is so especially of that part of the chin under or near each commissure of the mouth. Sometimes the eruption has a tendency to spread upward, encroaching slightly on each side of the upper lip; thus giving it the appearance of surrounding the mouth; however, it is mainly confined to the chin. These dingy or dirty shades are mingled together, with the dusky red, shading out to light brownish tints, which predominate at the sides; and a marked but extremely light yellowish hue scattered over the whole surface. In a number of instances there is also a suspicion of lilac. The point of the chin is in most cases clear, thus making a sharp high-light against the eruption. In a great majority of the cases the lesion is macular, but in a few instances where it is intense, the mild infiltration may slightly raise the epidermis; in such cases it might be termed maculo-papular. A very slight desquamation is observed at times, which is perhaps due to some of the lesions undergoing absorption. This symptom, which has been noticed for a number of years past, occurs more frequently in women than in men; in fact, nearly all the cases in which it has been observed have been women; its greater rarity in men is probably due to the growth of hair on the face; and since it is mainly a color sign, it is thereby obscured. It is occasionally observed in very young men and in those who keep clean shaved. The condition is sometimes more pronounced in those patients affected with a mild seborrhœa of the face, although seborrhœa is by no means a necessary concomitant for its development.

Though comparatively rare, it is not extremely uncommon; when present it is pathognomonic; almost as much so as the classical sign, the pigmentary syphilide of the neck, described by the French.

It sometimes precedes the macular eruption; it frequently occurs simultaneously with the roseola, and it may remain for a short while after the other symptoms have disappeared. It is distinct from the well-known annular syphilide so common in the negro, and also from the ordinary, well-defined papular eruption which is frequently found on the face.

It is one of the most difficult dermatological lesions to photograph; but after many attempts several fair illustrations have been obtained for presentation.

## FREQUENT ASSOCIATION OF LICHEN PILARIS WITH EARLY SYPHILIS.

Nearly all authors of modern text-books give lichen pilaris and keratosis pilaris as synonymous terms. This is as it should be, as they are practically the same condition. Nevertheless, the writer is inclined to think with Crocker, that the term keratosis pilaris might be assigned to that common affection supposed to be non-inflammatory, and lichen pilaris reserved to be applied when some acute or subacute inflammation supervenes. The point to be made here is, that lues probably furnishes the cause for the supervention.

Everyone is aware, of course, that keratosis pilaris is observed in hundreds of people, where no luetic or other infection exists; but the fact remains that it does exist in very many cases of early syphilis. Whether this is a mere coincidence or not is a question difficult to answer. It is possible that nearly all these patients may have had the keratotic condition before contracting their syphilis; but the frequency of the association of these two conditions has led the writer to believe that possibly lues may be a factor in the production of the lichen pilaris. If not actually producing it, the already existing keratosis is markedly accentuated, and much more severe after the added luetic infection; one would then be justified in calling it a lichen instead of a keratosis pilaris.

In support of these statements it can be said that the poison, generated or produced by the *spirochæta pallida*, shows an especial affinity for the follicles. This is true to a greater or less degree, regardless of the type of early eruption clinically apparent. If a histopathological examination be made of the early roseola or macular syphilis, it will be seen that the cell infiltration, though slight at this stage, is marked around the follicles. Pathologically, a more or less mild, acute or subacute folliculitis is thereby produced in practically every case.

Pursuing this line of thought, the theory deduced is that the follicles being mildly attacked by the infection, this subacute inflammation produced will cause an hypertrophy and a widening of the follicular mouths in places where the follicles are perhaps larger (arms, thighs and legs) and an already existing keratosis in these localities is made to appear more emphasized. Should the specific toxine have a more virulent action on the follicles causing a more acute inflammation, then the expression on the skin would be the dermatological classic, the miliary papular or follicular syphilide.

In further substantiation, it can be said that this condition is rather prominent in young girls who have contracted syphilis, in whom the integument is usually smooth before infection. Lastly, the condition rapidly improves under anti-luetic treatment, and if not disappearing altogether, it lapses back into its former state.

#### THE TENDENCY OF NITRIC ACID TO PRODUCE KELOIDS OR HYPERTROPHIC SCARS.

It is generally conceded that patients who suffer from keloids have a susceptible skin, or rather a derma with a proneness to the formation of keloids or hypertrophic cicatrices. Be that as it may, this action of nitric acid has been observed in a sufficient number of cases to lead one to believe that this caustic itself is to blame. This action could not be one of the intrinsic properties of the drug, as it would then produce the keloid in every case; perhaps it would be more logical to believe that the susceptibility in the integument of certain individuals varies in degree; only a slight trauma is necessary in some cases to produce a keloid, while in others a rather severe injury or strong irritant is required for its production.

This keloidal scar formation has been noticed on several occasions, where ordinary warts have been burnt off by druggists or friends, or perhaps by medical practitioners. The condition has been observed on the hands and occasionally on the face, where it causes a peculiar disfigurement which may last for life, and which is embarrassing to the patient. It might be added that this embarrassment is not restricted solely to the patient.

One case comes to mind at this writing where six or eight small telangiectases on the face had been touched with this acid with a very disastrous result, a keloid the size of the end of the little finger occurring on the site of each application.

It seems that this tendency of nitric acid is exerted more frequently on the unbroken skin than on the mucous membranes, as it rarely happens in genito-urinary work. However, before leaving the subject, it may be added that it has happened once in the writer's own practice on the under surface of the prepuce, following the treatment of an ulcer molle. One of the illustrations shown exhibits the extensive hypertrophic scarring following nitric acid which was thrown on with criminal intent; the other shows two small keloids following its application to two warts originally pinhead in size.



EFFECT OF THE ROENTGEN-RAY ON LESIONS OF THE MUCOUS  
MEMBRANE.

The remarks which follow may be considered in the nature of a plea for the more frequent trial of the X-ray in those cases of inoperable, malignant disease of the tongue and mouth.

Even in some cases that might be considered operable, but where total extirpation is necessary, it would be justifiable to try it. After the most radical operation it is probable that some of the cancer cells are left behind; this is proved by the recurrence of the disease in almost every case after a variable time, which interval unfortunately is only too short as a rule.

The opinion prevails that the X-ray is of very little value in the treatment of mucus membrane lesions, and the writer has no weighty statistics or long argument to disprove that opinion. In fact he has had only two cases, but the results were sufficiently brilliant to warrant further trial. The first was a woman with an epithelioma of the basal cell variety around the left angle of the mouth; it extended almost the whole distance across the vermilion border of the lower lip; this lesion healed after eight exposures of five minutes each; the result can be seen in the photograph.\*

The second case was a man 75 years old with an epithelioma of the tongue, almost the size of a silver quarter; it was situated on the left side of the tongue about two-thirds of the distance back from the tip; it was raised and fungating. Surgical measures were suggested to the patient, but were absolutely refused. X-ray exposures were then given; very cautiously at first, only one minute in duration at a distance of ten inches; the exposures were gradually increased to five minutes, at the same time gradually approaching the lesion to a distance of four inches. After twenty treatments the lesion healed; ten more exposures were given and then the treatment was discontinued.

A recurrence took place in both cases after a period of two years, but no claims are made against recurrence, and the patients seemed improved and infinitely more comfortable; one without the loss of his tongue for the remainder of his life, and the other with a very presentable appearance compared to her looks when first seen. Necessary surgical procedures would have produced terrible mutilation in the case of the woman.

\*The photograph of this patient was published by Dr. John A. Fordyce in the *Journal of the American Medical Association* for Oct. 24, 1908.

The male patient was shown before the New York Dermatological Society in May, 1908, and the discussion published in *THE JOURNAL* for October, 1908. The opinion was unanimous as regards the good result in the case, but was rather adverse as to the practicability of the method.

#### ALCOHOL FACILITATES BLEEDING.

In looking up the subject of alcohol in the numerous works on materia medica, the physiological action given seems somewhat paradoxical; since it is supposed to dilate the blood vessels, when taken internally, and to contract them or act as an astringent when applied externally. No reference is made to its effect on a raw or denuded surface; the point to which the writer desires to draw attention is its action on the broken skin.

The facility with which alcohol starts or increases hæmorrhage, was observed while treating cases of acne by the curettage method. During this operation the tops of a number of papules are scraped off, all of which bleed more or less. In one instance, after the bleeding had been stopped, while wiping off the face with alcohol for cleansing and antiseptic purposes, it was noticed that all the bleeding points began afresh, and by merely brushing over the surface with a pledget of cotton saturated with this drug, they could be made to bleed almost at will. It was immediately divined that this phenomenon would be of benefit in cases where it was desired to increase bleeding, and it has been advantageously used in cases of rosacea, where scarification was practiced.

Whenever multiple puncture or scarification is practiced it will facilitate the bleeding and the process can be continued as long as the physician desires. It may be of service in taking the blood from the ear for the complement fixation test; it is exasperating at times to have the stream cease before enough is collected, and this process of rubbing with a little alcohol may save another puncture.

#### THE TEACHING OF DERMATOLOGY.

This is a deep subject and too important to be treated in a hurried manner. It is intended to discuss only one phase of it; this is the method of post-graduate instruction in vogue at the clinic of the New York Skin and Cancer Hospital. It is in no way original with the writer, but he has taken the liberty of naming it "dermatological

sight reading"; since the clinical diagnosis is made by sight and nothing else.

A dermatologist must be an acute observer and there is no better way of training the powers of observation than by making the diagnosis from what one sees without the history of the case. In other words the disease must be told by inspection and palpation and the objective, not the subjective symptoms taken into consideration. The distribution, character, type, configuration, color, etc., of the lesions, can all be told by sight and it is rarely necessary for the patient to tell the physician that the disease itches; the scratch-marks tell their own story. After all opinions have been expressed, then the history can be elicited, confirming or denying the diagnosis. In this manner the student's powers of observation become quite acute, and he generally takes a careful look, after several failures in a room crowded with assistants.

Of course it would be the height of absurdity to practice this method on undergraduates who know nothing about the subject; but it is an excellent plan in post-graduate work, and for those men who intend to make dermatology a life study.

#### DISCUSSION.

DR. PUSEY said that when Dr. Trimble was speaking of the treatment of certain epitheliomata with X-ray, he was reminded of a remarkable case which he had seen with Dr. Engman, in which an epithelioma well back on the side of the tongue was treated with the Roentgen-rays and the man made a good recovery and had now remained free from a recurrence for over eight years. In view of the almost invariably fatal outcome of these cases after operation, he thought that an observation of this kind was of considerable interest. In spite of the statement made by Dr. Gilchrist at a previous meeting of this Association that he considered it criminal to treat an epithelioma of the lower lip with X-rays, Dr. Pusey said he had treated many such cases in this manner, and he could corroborate Dr. Trimble's observation that superficial epitheliomata of the lower lip often yielded remarkably well to X-ray treatment.

DR. MONTGOMERY said that in almost every case of epithelioma of the lower lip there was an accompanying seborrhœa of the same region, which, undoubtedly, should be treated. The epithelioma must first be removed, and this certainly could be done in some cases by X-rays, but no matter how diverse the opinions or facts might be in regard to the treatment of the epithelioma of the lip with X-rays, it was his opinion that they were an excellent remedy for the seborrhœa. This seborrhœa was a precancerous condition of which the epithelioma itself was the result. The seborrhœa extended completely across the lip, and an operation extensive enough to remove the seborrhœa would cause marked and unnecessary deformity. The speaker said he regarded this as a very important matter, and one that should be brought to the attention of surgeons, who disregarded entirely the seborrhœal condition.

DR. SCHAMBERG said that seven or eight years ago he had treated an extensive leucokeratosis of the tongue with the X-ray. The man developed an X-ray glossitis which was very painful, but which healed in the course of a few weeks. The patient was then lost sight of for a year, when he returned with a large, nodular cancer on the side of the tongue and multiple, superficial, cancerous lesions on the dorsum of the organ.

The speaker said that while this patient might have developed these lesions as the result of the leucokeratosis, he had always entertained the belief that the Roentgen-ray was an important factor in its production. Since then, at any rate, he had feared to use the X-ray on the mucous surfaces.

In a case of kraurosis vulvæ, a pre-epitheliomatous condition similar to leucokeratosis, he had carefully avoided the use of the X-ray and had cured the condition with applications of nitric acid. He thought that in spite of the favorable results that had been reported, one should use the X-rays very gingerly on the mucous membranes, and not at all in operable cancer.

DR. JAMES C. WHITE said that with regard to the production of keloid after the use of nitric acid, he had supposed that sulphuric acid was far more prone to produce such lesions than nitric acid. He had many times employed nitric acid as a local destructive agent, with or without the curette, as well as the acid nitrate of mercury, which was essentially the same thing, and he could not recall a single case of keloid produced by either of these agents.

With regard to the peculiar efflorescence surrounding the mouth and chin, to which Dr. Trimble referred, Dr. White said that in his experience the most noticeable syphilitic lesions in this region were those of the annular type rather than those described by the reader of the paper.

DR. GRINDON said the acid nitrate of mercury had been a favorite application of his for many years, and he had never seen a keloid or large cicatricial lesion from its use.

Referring to radiotherapy in the treatment of cancerous lesions of the lip, the speaker said that in one case of carcinoma of the lower lip which was treated with the X-ray, the patient was cured and had thus far been free from recurrence for over nine years. This showed that at least in some cases the employment of this therapeutic agent was proper.

DR. HARTZELL said that with regard to the use of the X-ray in epithelioma of the lower lip, with proper exposure, not too prolonged, favorable results frequently follow in selected cases. He could recall a number of instances in which the employment of the Roentgen-ray, with exposures of three or four minutes, was followed by the happiest results. The mucous membranes were very sensitive to the X-rays, and for that reason short exposures were necessary.

DR. GILCHRIST, replying to Dr. Pusey, said he was still willing to uphold the statement that it was criminal to use the X-rays in the treatment of epithelioma of the lower lip. In this condition, we usually had early involvement of the glands, and these were not benefited by the use of the Roentgen-rays. All cancers of the lips should be treated surgically, as every case required removal of the neighboring glands. It was very important that dermatologists should recognize epitheliomata in the very early stage when it required an expert to diagnose the disease. In that stage, Dr. Gilchrist said, he had seen better results obtained with the use of radium than with the application of X-rays. The same was true of chronic eczematoid lesions of the mucous membranes and of chronic fissures of the lower lip, but when the condition was undoubtedly cancerous, then surgical treatment, with excision of the involved glands, was indicated.



DR. ROBINSON said that some of the points raised in the discussion thus far were of great interest to him. In a fairly extensive experience he had never yet been able to recognize a basal-celled carcinoma of the lower lip; all of his cases had been of the spindle-celled type. A rodent ulcer of the lower lip was unknown to him.

As to the seborrhœal condition of the lip referred to by Dr. Montgomery, the speaker said he failed to recognize in what way a seborrhœa of the mucous membrane could influence an epithelial formation in carcinoma.

As to the use of the X-ray in these cases, Dr. Robinson said his experience coincided with that of Dr. Gilchrist, and he had always found that the Roentgen-ray only aggravated prickle-celled carcinoma. It was unreliable, and instead of acting as a destructive agent in these cases, it rather stimulated them to increased growth. Personally, in dealing with epitheliomata of the mucous membranes, he relied entirely upon surgical means—either caustics or excision, usually the latter. Furthermore, he had learned that where the X-ray had been used on the lip or cutaneous surface and a cure was not effected, the case was more difficult to handle than before, especially by caustics.

DR. SHEPHERD said he agreed with Dr. Gilchrist that it was criminal to treat a cancer of the lower lip in any other way but surgically, as in those cases the glands were almost invariably affected. He believed that every surgeon was educated to that fact now and that it was generally recognized by the profession.

With regard to the production of keloid, Dr. Shepherd said he had used the acid nitrate of mercury quite extensively, and had never seen a keloid result from it. He had seen keloids on the neck result from the use of subcutaneous sutures, and had given them up on that account.

DR. LEVISEUR asked how those gentlemen who treated epithelioma of the lip with the X-ray measured their dose? The difference between the knife and the Roentgen-rays seemed to him to lie in the fact that one could easily control the former while it was difficult to measure the latter. The X-rays should not be used in cases of epithelioma of the lip, without trying to measure the intensity of their action by the penetrometer and Sabouraud's pastilles.

DR. HOWARD FOX said he could bear out Dr. Trimble's statement that keloids might follow the application of nitric acid. He referred to a case of extensive nævus pigmentosus shown at the last International Dermatological Congress, that had been partially treated with the caustic. An over-zealous application of the acid to a pigmented and hairy patch upon the cheek, had been followed by a distinct keloidal scar.

The speaker stated that his attention had been frequently called to the mottled chin by his colleague, Dr. Trimble, at the Skin and Cancer Hospital. From the presence of this symptom he had often been able to make a "snap" diagnosis, which was later confirmed by the presence of a general syphilide upon the trunk when the patient disrobed. It was certainly true, as Dr. White had remarked, that the annular syphilide was often seen upon the chin, particularly in the negro. The papular and the tubercular forms of the disease were often, of course, to be found in this locality. It was, however, the presence of these dirty, blotchy macules upon the chin, described by Dr. Trimble, that seemed to be of particular interest, as they did not appear to be mentioned in the text-books.

DR. PUSEY said he did not believe the rodent ulcer type of epithelioma of the lower lip a rare lesion. It usually began as a superficial ulceration and extended along the surface of the lip. It was a rather common lesion in his experience.

As to the treatment of these lesions with the X-ray, Dr. Pusey said that



about seven years ago he collected twenty cases in which he had employed that treatment, and he had never had occasion to regret it. Among this list were patients who were close relatives of surgeons, by whom the cases had been referred to him for Roentgen therapy, in preference to the knife.

DR. MONTGOMERY said he wished to reiterate his statement that there was such a thing as a seborrhœa of the lower lip in connection with these cases of epithelioma. Where there were sebaceous glands seborrhœa could develop, and that there were sebaceous glands in the lower lip was shown, for example, by Fordyce's disease. There was a row of sebaceous glands across the mucous membrane of the lower lip just above the cutaneous line, and it was this row of glands that was so apt to be affected in epithelioma of this region, and it was the seborrhœa of these glands that it was so important to treat after the removal of the epithelioma.

DR. FORDYCE said that during the past twenty years he had examined histologically many epitheliomata of the lip, but had never seen a primary basal-celled epithelioma of this region. In the case which Dr. Trimble had referred to the epithelioma had extended to the lips from the cheek and was not primarily a tumor of this region. The speaker agreed with Dr. Robinson that practically all of these epitheliomata of the lip were of the squamous-celled type, and he also believed that surgical treatment was the method of choice in these cases.

DR. HARTZELL said he would take the liberty of recalling a case which he had already reported at one of the previous meetings of this Association. The case was one of superficial epithelioma of the lip of many years' duration, in a man of ninety, who refused surgical treatment and who was thereupon subjected to the X-rays. He was given nine exposures of three minutes each, and after the ninth exposure it was impossible for any one to discover any signs of the epithelioma.

The speaker said he was not an advocate of the routine treatment of these cases with the Roentgen-ray, but in certain cases it was certainly beneficial, and in the case he had just mentioned, a man of advanced age was spared operation and lived for several years without any signs of a recurrence. With due deference to the opinion of his surgical friends, they could not have done any better if they had cut away the man's entire chin.

DR. GILCHRIST said that with epithelioma of the lower lip there was early glandular involvement. He had never seen what he would diagnose as rodent ulcer of the lower lip.

DR. TRIMBLE said he agreed with both the surgeons and the dermatologists. This individual case was a basal cell epithelioma, and as Dr. Fordyce had stated, it began near the left angle of the mouth, and had encroached on the mucous membrane of the lip; but, where it began, and whether the growth was basal or squamous celled, was not the point he wished to make.

He agreed with the surgeons, that if the case were operable, surgical measures should be resorted to; if it were inoperable, other measures had to be tried. Dr. Hartzell had struck the keynote when he said that many of these patients refused operation; in such a contingency some other method of treatment had to be found.

In the two cases referred to, one of the patients had absolutely refused operation, and the other case had been given up by the surgeon.

The speaker also said that, in his experience, he had seen three or four cases where keloids followed the use of nitric acid, such as the ones he had reported; but he had never seen such a result from acid nitrate of mercury. The first observation, the mottled chin in syphilis, was the part he considered of most importance in the paper.

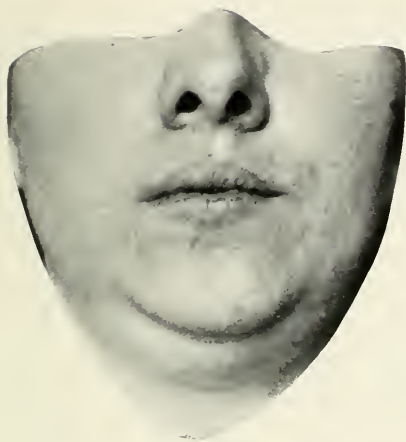


FIG. 1.  
Mottled Chin in Syphilis.  
Typical lesion.

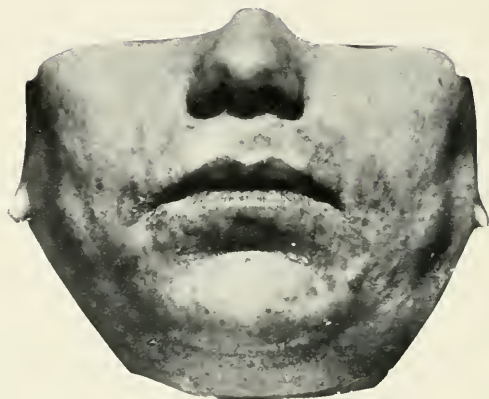


FIG. 3.  
Mottled Chin in Syphilis.  
Intense degree.

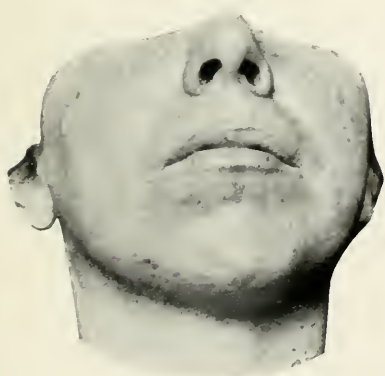


FIG. 2.  
Mottled Chin in Syphilis.  
Mild degree.

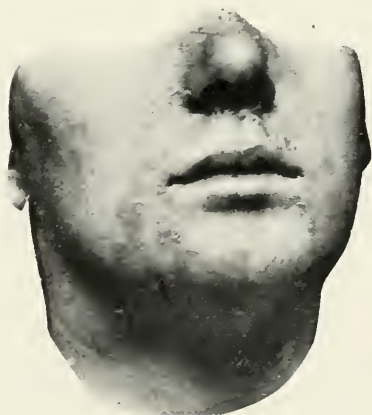


FIG. 4.  
Mottled Chin in Syphilis.  
Associated with seborrhœa.





FIG. 6.  
Lichen Pilaris Associated with Luës.



FIG. 5.  
Lichen Pilaris Associated with Luës.





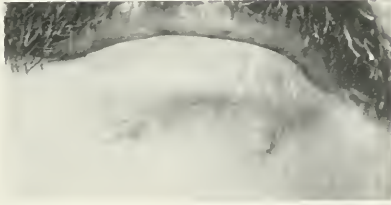


FIG. 7.  
Keloids Following Application of Nitric Acid.



FIG. 8.  
Hypertrophic Scarring Following Application of Nitric Acid.





FIG. 9.  
Rodent Ulcer Involving Both Lips.  
Before X-ray treatment.



FIG. 10.  
Rodent Ulcer Involving Both Lips.  
After X-ray treatment.



## ERYTHEMA NODOSUM SYPHILITICUM.

By FREDERICK J. LEVISEUR, M.D., New York.

Consulting Dermatologist, Montefiore Home and Hebrew Orphan Asylum; Associate Attending Dermatologist, Mt. Sinai Hospital.

**C**HARLES MAURIAC, in 1880 and 1881, was the first to draw attention to what he called "erythema nodosum syphiliticum." The lesions consist of oval and egg-shaped tumors or irregular plaques occupying the derma and hypoderma, separately or simultaneously. They are of the size of a small nut or larger, some attaining a diameter of 3 to 4 centimetres. Their usual localization is the arms and legs, the trunk and face being rarely affected. Their color is of a rosy or violaceous red, which cannot be made to disappear entirely by pressure. Often they are surrounded by an œdematous zone. Painful on pressure, they also sometimes spontaneously feel tense, heavy and are the seat of disagreeable sensations. Their appearance is almost always preceded or accompanied by fever or gastrointestinal disturbances. Rheumatic pain or general aching is present which is much more pronounced at night.

The more superficial and extended the eruption the more pronounced the symptoms of general disturbance. A single attack as a rule lasts for thirty or forty days, and several such attacks may follow each other in various intervals. The tumors disappear by absorption, and Mauriac states expressly that he never saw them undergo softening, exulceration, or break through the surface of the skin. There are some which are entirely subcutaneous, not adherent to the skin, but freely movable. Among these, Mauriac describes a few which he thinks have started from the skin and gradually have sunk deeper until they adhere to the latter only by a slight outward pedicle. These tumors particularly differentiate the affection, according to the author, from erythema nodosum, as does also the greater hardness or plasticity of the lesions in general; some resembling almost a phlegmon. In regard to treatment, he found iodide of potash more effective than mercury, and "mixed treatment" superior to either one alone.

In Mauriac's own words: *Erythème noueux syphilitic est caractérisée par la généralisation simultanée et form éruptive de néoplasie variées sur les différentes parties du corps, mais principalement aux membres inférieurs et moins souvent aux membres supérieurs. Elle est accompagnée de phénomènes fébriles et pertur-*



bations rhumato-neuralgiformes, siégeant dans les parties qui vont devenir le siège de ces néoplasies aiguës. La néoplasie reste toujours solide et ne subit aucun degré la phase nécrobiotique qui conduit au ramollissement.

Three affections form a group which he calls "affections syphilitic precoces du tissu cellulaire souscutané." Of these, erythema nodosum syphiliticum is the first. He believed it to appear during or at the end of the so-called secondary period and evidently considered it to mark the case as one graver than found in the ordinary run.

Besnier and Doyon describe a case of "papulo-nodular syphilide precoce" which resembles Mauriac's cases. Balzer and Barthélemy believe that these cases are simply accidental combinations of erythema nodosum and syphilis. Jullien and Tenneson refer to Finger's statistics. There were nine cases of erythema nodosum and multiforme among 345 cases of syphilis. They deny the syphilitic nature of affections resembling erythema nodosum.

Testu is a believer and adds two new cases observed by Leloir. Leloir and Fournier express themselves as having noted the frequent occurrence of what they call a combination of erythema nodosum and various syphilitic symptoms.

Vidal and Leloir declared, in 1893, that syphilis predisposes to the appearance of erythema nodosum, the same as does rheumatism and tuberculosis.

De Beurmann and Claude called attention to those lesions which gave the impression of having become gradually detached from the skin and sunk into the subcutaneous tissue. These they consider to be gummata and the other lesions, so very much like ordinary erythema nodosum, simply to represent an earlier stage of evolution. The six cases which these authors relate are all in support of this modified view; they are the first cases reported since Mauriac.

In the first case, the eruption appeared as early secondary symptom after an iritis and smaller papular syphilide, thus marking it as a comparatively grave case. According to the patient's statement, she had had rheumatism prior to acquiring syphilis. The next three cases had had no rheumatic antecedents. In the third case, a woman thirty-seven years old, there was marked fever. This may, however, have been due to the patient's run-down condition. The gravity of the case was otherwise marked by a large phagedænic chancre of the lip. The patient was discharged as cured three months after ad-

mission to the hospital, during which time she took two Dupuytren's pills and two grammes of iodide of potash per day.

In the fifth case, movable nodules, as described above, appeared first and then became gradually attached to the skin, reddening and thinning it wherever they protruded. The patient was subject to rheumatism; the appearance of the lesions was not accompanied by rheumatic pain. This case also may be classed as grave, on account of double iritis, miscarriages, etc. This, therefore, was a case creating the impression of multiple gummata, later on, changing into erythema nodosum syphiliticum. In the sixth case, an old ulcerated gumma was still present, when the lesions resembling erythema nodosum made their appearance. These authors then, while not denying the possibility of coincidence or of a superadded infection, strongly believe in the syphilitic nature of the affection.

The clinical difference of the lesions is to them simply due to variations of intensity of the pathological process. They give a progressive scale as follows: "Erythème papulo-nouveux, erythème nouveux, nodosités cutanées sans erythème, nodosités cutanées circonscrites, gommès resolutives et gommès ulcéreuses." Among the German writers, Finger, as early as 1882, took a decided stand in the discussion of this interesting subject. He describes seven cases of erythema nodosum and three of erythema multiforme, occurring in connection with syphilis, and points out the more than accidental relation of these affections already referred to by Hebra, Lipp, Tancuri and Danielssen.

Lesser defines erythema nodosum syphiliticum as "eine eigenthümliche und sehr seltene sekundaere Erscheinungsform der Syphilis:" a peculiar and very rare secondary manifestation of syphilis.

Jadassohn is of the opinion that some grave cases of syphilis show symptoms resembling erythema nodosum. Neisser and Wolff emphasize the presence in these cases of blood-vessel changes of luetic character. Glueck offers a contribution of four cases of erythema multiforme and nodosum with secondary, and one case with tertiary syphilis.

In 1903, Max Marcuse, in an article: "Ueber nodöse Syphilide und syphilitische Phlebitis," reports three cases. Two of them were surely secondary manifestations, the third one, probably so. In all cases a grave general character of syphilis was in evidence. There was fever in the second case. Marcuse's conclusions are as follows: In rare cases of severe syphilis there appears cutaneous lesions where ordinary erythema nodosum is apt to occur. This eruption so

closely resembling the latter, should be regarded as a specific exanthem and named according to the French: nodular syphilide. The lesions appearing as a rule in the first year after infection, are often found together with other secondary syphilitic symptoms. The nodes are either absorbed or they soften and ulcerate. The disease yields to specific treatment, more to mercury than to iodide medication.

Examination of a non-ulcerated node showed an arrangement of granulation tissue and necrotic areas which makes it probable that the pathological process starts from the intima. But aside from this endophlebitis specifica, there is also present a gummatous change confined to a separate portion of the wall of the vessel, suggesting as origin the presence of an embolic occlusion of some of the vasa vasorum.

Hoffmann gives a detailed clinical description of twelve cases, seven of which are erythema nodosum syphiliticum. They all concern girls from fifteen to twenty-three years old. He agrees with Mauriac as to the absence of softening or exulceration of the nodes as an essential requirement for the establishment of the diagnosis, but he disagrees with the same author in regard to the existence of that variety of node which was referred to above as becoming detached from the skin and sinking, so to speak, into the deeper tissues. Gummata, together with typical nodes of erythema nodosum, never came under his observation. The subsequent and more elaborate paper of the same author, reveals clearly his position in regard to erythema nodosum syphiliticum. The name "nodular syphilide" he wants to have reserved for the subacute appearance of bullet- or spindle-shaped nodes, mostly on the lower limbs. This affection is liable to show itself soon after the breaking out of the first syphilitic exanthem, preferably in women with varicose veins. It responds to specific treatment. The histological examination of a case enables him to go further than Marcuse and claim as origin of the affection a syphilitic thrombophlebitis, without any trace of necrosis. Clinically, softening and ulceration may be in evidence and he finds an explanation in accidental local conditions (varicose veins, etc.). Nevertheless, the nodes should be differentiated from true gumma, though the possibility of one passing into the other can not be denied. With this nodular syphilide he contrasts "erythema nodosum et multiforme syphiliticum" which is due to a phlebitis of small subcutaneous veins. It is truly syphilitic in its nature, has nothing to do with rheumatism and yields, not to

salicylates, but to anti-syphilitic remedies. He quotes Jullien, who has reported a case of "Mauriac's disease" which is particularly typical from a clinical standpoint on account of the presence of the movable subcutaneous nodes referred to above. Hoffmann himself, then describes a case in which these nodes were present. This case he observed after the publication of his first article. Plaques of efflorescences of the type of erythema multiforme were also noted. After injections of calomel and iodide of potash internally, the fever quickly vanished and the nodes disappeared inside of two weeks. Nothing is known of the subsequent development of this case.

Scherber in his "Beiträge zur Klinik und Histologie der nodösen Syphilide" gives a very good review of the literature from which I have quoted the above. His material, derived from Prof. Finger's clinic is large. Inside of a year and a half, there came for hospital treatment: 626 men and 671 women with syphilis; for dispensary treatment: 539 men and 138 women. Among these, there were only two cases of nodular syphilide and one case of erythema multiforme in a luetic. Only one of the two nodular cases was a "Mauriac." This confirms Lesser's view of the rarity of the affection. This case was very thoroughly investigated and described and may be summarized as follows: A woman twenty-four years old, one year after infection had a slight eruption of a papulo-necrotic syphilide. Suddenly there appeared tumefactions with accompanying fever and pain. These swellings were located on the lower extremities, partly nodular and bullet-shaped, partly flat, like ill-defined infiltrations. They were spontaneously painful. Some of them disappeared (iodide medication), others exulcerated. Inflammation of the joints was present. The whole process had the character of an attack, progressing, reaching an acme (ulceration) and then ceasing. In regard to differential diagnosis, erythema induratum of Bazin had to be considered, because clinical symptoms of tuberculosis were present. In fact, the same case had been shown before the Vienna Dermatological Society with the diagnosis "Mauriac or Bazin." Neumann, at this very meeting, spoke in favor of erythema induratum (Bazin). However, bacteriological as well as histological examinations clearly proved the incorrectness of this diagnosis. A tuberculin injection, as a test, was refused by the patient. A careful microscopical examination of a non-ulcerated, excised node, made it apparent that the resemblance with Bazin on the one hand and erythema nodosum on the other, was simply a clinical one. There



could be demonstrated an inflammatory process starting from the blood vessels, particularly from the arteries of the subcutaneous tissue. This inflammation mainly localized in the adventitia, had produced granulation tissue without necrosis. Slowly spreading along the vessels and around the sweat glands, it invaded the skin and produced subcutaneous nodes. The fatty tissue with its vessels was also involved. In some places it was found to be entirely replaced by the granulation tissue mentioned above.

Scherber concludes that the lesions of erythema nodosum syphiliticum are the products of syphilis. He takes issue with Rieder, Procksch, Philippson and Török, who believed either in the exclusive participation of veins in this syphilitic process, or at least in the preponderance of this condition as compared to arterial changes.

Török, in the *Pester medizinische-chirurgische Presse* (1908), chooses for a title of his very interesting paper: "Ueber das sogenannte (so called) Erythema nodosum syphiliticum." He is convinced of the true syphilitic nature of the disease which bears striking resemblance to ordinary erythema nodosum. The latter is a disease, he says, which appears somewhat endemically, at certain seasons of the year with regular recurrences. It produces embolic, inflammatory foci located in the skin or subcutaneous tissue. There exists, therefore, the anomaly that names which are meant for certain diseases, are also used to designate cutaneous changes, which in reality are simply symptoms of different diseases. Erythema nodosum syphiliticum is a misnomer. Since it has been generally accepted to be a truly syphilitic disease, it should find a place, in accordance with Mauriac, under the "productions gommeuses precoces du tissu souscutané."

Of the five cases which Török contributes to casuistics, the first one is a typical "Mauriac": The patient was a man thirty-seven years old. He had a chancre followed by a roseola. Two days after the appearance of the roseola, large nodes developed on both legs. They disappeared after one month, leaving a deep infiltration of the size of a hazelnut with central fluctuation. Two weeks afterward, a large necrotic ulcer developed. This ulcer healed within one month. Nine months afterward, a repetition of the same symptoms occurred. Very intense treatment by injections, inunctions and iodide medication, healed all the cutaneous lesions, but finally brain symptoms developed, followed by periostitis of the nasal bones. The second case was at first diagnosed as erythema



induratum (Bazin), until the appearance of a specific iritis dispelled all doubt. All the cases have these points in common: that there suddenly appear numerous bullet-shaped infiltrations in the subcutaneous tissue or in the borderline of the latter and the cutis. They are surrounded by a distinct hyperæmia. Their arrangement is symmetrical, their localization most frequently on the lower extremities, with a striking resemblance to the erythema nodosum of Hebra. They are nothing else but cutaneous or subcutaneous syphilomata. Like the ordinary gummata they are most likely of hæmatogenous origin and their pathological process begins with phlebitis as shown by Philippon and Darier.

It is hardly necessary to point out the remarkable clinical and histological parallelism of syphilis and tuberculosis in general. But I would like to call special attention to a group of diseases which, with great probability, belong to the latter, namely, the subcutaneous sarcoid of Darier, the miliary lupoid of Boeck, lupus pernio and erythema induratum (Bazin). They are not remotely related only to tuberculosis (toxin-theory) but proof of their bacillary identity or kinship is accumulating. In erythema induratum (Bazin) particularly, though it is the longest known of these affections, we must still depend on family history, presence of other tuberculous stigmata and the effect of tuberculin injections.

Bazin's original description of erythema induratum was as simple as Mauriac's of erythema nodosum syphiliticum, namely, hard red nodes of the size of a walnut, usually appearing on the legs of scrofulous or lymphatic individuals. Women and young girls form the great majority of patients. The favorite localization is the exterior, lower part of the legs, but the upper extremities, even the face, may become affected. The tumors occupy the cutis and subcutis, yield momentarily to pressure and are not spontaneously painful nor itchy. Their red color often assumes a bluish shade. But gradually here, also, additions were made to the original clinical picture by later writers. Hardy and Hutchinson included cases with ulcerated lesions; Feulard, Fournier, Harttung and Alexander, cases with large plaques and infiltrations. Payne, Pinkus, Wolff and Pringle, cases with efflorescences in marked orbicular arrangement. In three cases, the main localization was the trunk; in ten, the affection was positively asymmetrical. Schidachi calls attention to recurrences of attacks at certain seasons of the year, a fact which has been pointed out before by Whitfield, Pautrier, Hirsch, Towle, Polland, Morris, Dade, Bronson, Csillag, Pringle and Abra-

ham. In Schidachi's statistics, there are 51 atypical cases among 152. There were only 21 cases in men. In many cases there are typical lesions combined with others, entirely foreign to the disease. Bacilli were found in four cases. Philippson (animal inoculation negative), MacLeod and Ormsby, Schidachi and Kuznitzky each describes one case. Only the last two were typical cases. Mucha adds the description of four cases. In one case there was present a tuberculous affection of the apex of the lung, in one case marked, in another only a slight local reaction. Mucha concludes his article with the remark that future investigations will result in further bacillary proof of the tuberculous nature of erythema induratum and he would, as soon as this was obtained, suggest (in accordance with Kyrle) a change of name by incorporating into it the word "tuberculous."

I do not believe that the description of cases will help us a great deal to put erythema nodosum syphiliticum on a solid basis as a recognized form of syphilis. Nothing short of the discovery of the presence of the *spirochæta pallida* will have such a result. But even in the absence of this proof, erythema nodosum syphiliticum should be considered a form of syphilis as much so as erythema induratum one of tuberculosis. From a practical standpoint, Mauriac's disease may be confounded with rheumatism, and treated as such. This is easy to understand when we consider that it is often associated with fever, headache, neuralgia, pain and swollen joints. The salicylates and other anti-rheumatic remedies, as well as hydro- and mechanico-therapeutic measures found beneficial in rheumatism, are, however, powerless to cure or relieve the disease. Energetic anti-syphilitic treatment will cure individual attacks. But in spite of this, these cases seem to go from bad to worse. The formation of gummata after, or even during an attack is a frequent occurrence, and gives to the affection a pronounced feature of malignancy. It belongs to the grave forms of syphilis, where severe symptoms follow each other in rapid succession, without the usual protracted intervals of quiescence. Buschke and Fischer have shown that the number of *spirochætæ* in the malignant cases is by no means larger, nor the inoculation of animals more readily accomplished, and that the *spirochætæ* actually found do not show a greater degree of activity. We still must assume, therefore, a special sensibility of certain individuals, or an association of other microbes, which increases the virulence of the treponema.

Erythema nodosum syphiliticum is probably hæmatogenous in origin; if so, it is presumably not due to a toxine, but to the specific organism itself.

It is very interesting to follow Prof. Philippson's ingenious deductions, which are based mainly on anatomico-pathological grounds. But following him we will have to put together in one class all skin diseases which are due to embolic changes of the veins, and the borderlines between syphilis, leprosy, tuberculosis and several other diseases would then become so ill-defined that practical decisions in regard to differential diagnosis would have to be left to the result of laboratory investigations entirely.—My conclusions are as follows:

1. Mauriac's disease is a form of syphilis.
2. The striking resemblance between Mauriac's disease and Bazin's disease is becoming more and more apparent.
3. It is a malignant form of syphilis (precocious tertiary), frequently preceded, accompanied or followed by the formation of gummata.
4. It is liable to be mistaken for rheumatism, or an accidental combination of both rheumatism and syphilis.

680 Madison Avenue.

#### DISCUSSION.

DR. SCHAMBERG said that in 1902 he saw a woman who was admitted to the Municipal Hospital for Infectious Diseases and who was supposed to be suffering from smallpox, but whose eruption proved to be that of secondary syphilis. The woman later developed lesions over both tibiæ, which were characteristic of erythema nodosum, and the affection ran a course indistinguishable from the usual course of erythema nodosum.

## A FATAL CASE OF BLASTOMYCOSIS.

By FRANCIS J. SHEPHERD, M.D., LL.D., and L. I. RHEA, M.D.,

Montreal.

M. M., an Italian, twenty-five years of age, came to our clinic on Aug. 2, 1910, complaining of an eruption on the nose and side of the face. Thinking the case looked like blastomycosis we admitted him into our wards for observation.

HISTORY. His parents are living and healthy; his brothers and sisters are also healthy. When he came to this country two years ago he was in perfect health, but began to fail about four months ago. He has been working as a railway navvy, but lately has lived in Montreal.

On examining him in the wards the day after admission, we found that in addition to the eruption on his face, there was a sinus discharging pus freely and leading down to diseased bone at the sternal end of the right clavicle; also a fluctuating swelling over the second lumbar vertebra. The growth on the face covered the upper three-quarters of the right side of the nose, extending up to the inner canthus of the eye, and was continuous with a fungating growth below the right lower eyelid, the size of a twenty-five-cent piece. This, in parts, over the nose, was ulcerating and discharging pus. There were spots, evidenced by scars, which showed healing; in some locations a thick scab covered the ulceration and in the neighborhood of the growth, on the right cheek, were some nodules of a reddish color which had not yet ulcerated.

Portions of tissue were removed and sent to the pathologist and cultures were also made from pus taken from the lesions on the face and that coming from the sinus at the upper end of the sternum.

An examination of the heart and lungs was negative at this time and the urine was also found to be normal.

The pathological examination, both cultures and sections, having shown blastomycosis, the patient was put on twenty-grain doses of iodide of potash three times a day. This appeared to do him no good, for by September 1st, his respirations became rapid (36) and his temperature rose to 102° F. and a dull area appeared over the base of the right lung, with diminished breath sounds and increased vocal fremitus, but no blowing breathing. There was diminished expansion on the right side. An aspirating needle was thrust into the dull area, but only bloody fluid resulted, which produced no cultures of the

blastomyces. His sputum, which at this time was very profuse, also yielded no evidence of blastomycosis on examination.

His condition growing worse, to our sorrow, he left the Hospital on October 8th, promising to report his condition from time to time. We heard nothing from him until October 24th, when he again applied for admission.

On again examining him, we found that the lesion on his face had increased in size and new spots had appeared below the old ones. His left lung continued to be clear and healthy, but his right lung was somewhat worse than before. The sinus over the upper part of the sternum was much the same, but the fluctuating swelling over his lumbar spines had increased in size and was red and shiny. A red, swollen area had appeared over the right wrist. The pulse was now 96 to 120, respirations 25 to 30 and the temperature, 98° to 101° F.

The tumor in the lumbar region was opened and much pus evacuated; the bone was not involved. Cultures showed blastomycosis. He had become very emaciated and treatment with iodide of potassium was of no avail, even in doses of forty grains three times daily.

In November, the condition of the lesions was as follows:

"The large growth on the face now involves the upper and lower eyelids of both eyes and the tissues over both malar bones and nose. The edges of the ulcerated areas are sharply defined, raised and irregular in outline and covered by a dry, brown crust. When the crust is removed the edges of the ulcers seem to be lobulated and deeply fissured. The ulcer over the malar region extends to the bone. The left lower eyelid is much retracted, exposing the eyeball. The disease has now affected the left nostril and the left upper lip and has extended to the adjacent mucous membrane. The lesions on the lip are, as yet, quite superficial. New areas are beginning to involve the chin and under the chin is a new lesion about 1 cm. in diameter.

"On the back of the neck, just below the lower margin of the hair, there are several superficial, reddish spots of disease, sharply outlined. The sinus at the sternal end of the clavicle has increased in size and a new sinus has opened above the old one, which also leads to a cavity in the sternal end of the clavicle. Both sinuses discharge pus freely.

"Over the posterior border of the deltoid muscle, near the axillary fold, an ulcerated area, 2 cm. in diameter, has appeared, with raised undermined edges. Over the upper lumbar region where the abscess was opened, there is a deep ulcer discharging pus; there is also an



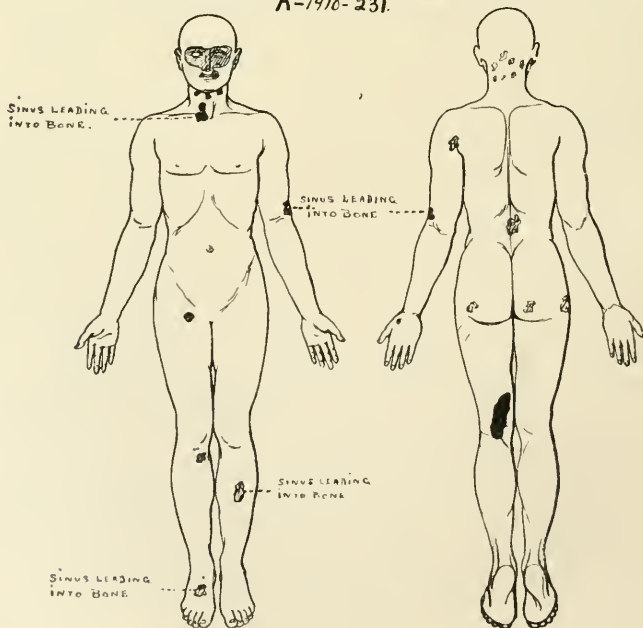
ulcer on each buttock and over the right great trochanter. There are sinuses in front of the left tibia, on the inner surface of the lower end of the right humerus and over the middle of the right tarso-metatarsal articulation, all leading down to diseased bone.

"Before death, a large fluctuating swelling appeared in the left popliteal space and right inguinal region. The condition of the right lung became worse until the whole organ was involved.

"By the beginning of December, the patient became much more emaciated, the pulse continued to be rapid, high temperatures prevailed and the patient gradually grew weaker and died on December 27th, about nine months from the first onset of the disease."

DISTRIBUTION OF THE SKIN LESIONS IN A CASE OF  
GENERALIZED BLASTOMYCOSIS.

MONTREAL GENERAL HOSPITAL.  
A-1910-231.



ULCERATED AREAS ARE SHAD

SUBCUTANEOUS ABSCESSSES ARE SOLID

The autopsy report subjoined herewith has been furnished me by Dr. L. J. Rhea, Director of the Pathological Laboratory of the Montreal General Hospital, and to whom I am also indebted for the excellent photomicrographs.

#### AUTOPSY.

(10—231.)

The chief interest in this case, from the pathological viewpoint, is the wide distribution of the lesions, the character and extent of these lesions and the bacteriological study. The following is a brief extract of the post-mortem findings. No reference is made to the cutaneous lesions, as these have been described in the clinical presentation of the case.

**PERITONEAL CAVITY.** The parietal peritoneum, great omentum, gastro-hepatic omentum, and the capsules of the liver and spleen, are thickly seeded with small, discrete, yellowish-white, firm areas, which vary in size from 1 mm. to 3 or 4 mm. in diameter. They are most numerous in the great omentum, the pouch of Douglas, and in the recesses on each side of the lower lumbar vertebrae. The mesenteric lymph nodes are slightly enlarged. On section, they show soft, pinkish pulp in which are numerous small, rounded, soft, yellowish areas.

**PLEURAL CAVITIES.** Both pleural cavities show fibrinous adhesions between the parietal and visceral layers. The heart and pericardium show no evidence of blastomycosis.

**LUNGS.** Right, 920 gms.; left, 950 gms. The right visceral pleura is thickened, varying from 2 to 5 mm. in thickness, is firm, opaque and tense, especially over the lower lobe. The lung tissue cuts readily, has a fleshy appearance and shows diffuse consolidation. The greater part of the right lung consists of grayish areas of different sizes, between which the tissue is pale red. The lower lobe is much smaller than normal. The pleura covering this lobe and that between the upper and lower lobes, averages 3 to 5 mm. in thickness and throughout, there are numerous sharply outlined, generally oval, yellowish areas of softening, which vary from 1 mm. to 1 cm. in length.

The bronchi are wide and are generally surrounded by a zone of pale, white, glistening, firm tissue. The cut surface of the lung shows several honeycombed areas, in which are numerous cavities, varying from 2 to 9 mm. in diameter. They contain a greenish-gray, puriform material.

The left lung is larger than the right and its pleura contains yellowish-white, slightly elevated areas, which vary from 1 to 4 mm. in diameter and are apparently in the underlying lung tissue. The cut surface is dark red and shows very many discrete and confluent yellowish-white areas, which vary from 1 to 5 mm. in diameter. These areas contain thick, yellowish, puriform material. The bronchi do not show the peribronchial thickening present in the right lung.

**SPLEEN.** Weight, 220 gms. There is no evidence of blastomycosis, besides the nodule seen in the capsule.

**LIVER.** Weight, 1150 gms. The only gross lesions are seen in the capsule, where there are numerous yellowish areas similar to those seen elsewhere in the peritoneum.

**KIDNEYS.** Weight, 280 gms. Shining through the capsule are several sharply outlined, small, round to oval, yellowish-white areas. These are scattered over the

whole surface. In both the medulla and cortex are numerous yellowish-white, soft areas, varying from 1 to 4 mm. in diameter. They consist of puriform material. They are more numerous in the cortex than in the medulla.

**ADRENALS.** In the cortex of the left adrenal there is a yellowish-white area, 3 mm. in diameter, which contains soft material. The right adrenal shows no macroscopic lesions.

**GASTROINTESTINAL TRACT.** This is normal except the œsophagus, 7 cm. from the cardiac end of the stomach there is a small fluctuating area, 1 cm. in diameter, just beneath the mucous membrane.

**OSSEOUS SYSTEM.** The right clavicle, right elbow joint, left tibia and left carpo-metatarsal bones were removed and later examined. The elbow joint and tibia were sawed longitudinally with a band saw.

**RIGHT CLAVICLE.** The inner 5 cm. of the clavicle is thickened; 2.5 cm. from the articular surface it is 2.8 cm. thick; the articular surface is normal. 3 cm. from the articular surface there is an oval hole, 1.1 cm. long and 6 mm. broad, in the bone, which communicates with the medullary cavity. The anterior surface of the clavicle throughout the inner 5 cm. is roughened, due to narrow, communicating bands of bony tissue, between which are depressed, elastic, pale, glistening tissue, apparently the periosteum, beneath which the bone has been destroyed.

**RIGHT FOOT.** The bones of the right foot, about which the sinus described communicates, have lost their periosteum. Their external surfaces are granular, and surrounding them there is a thick, purulent fluid.

**TIBIA.** The tibia is sawed longitudinally, just to one side of an opening in the bone which communicates with the medulla and the sinus referred to above. The medullary cavity, beneath the bone sinus, shows a marked change. Throughout an area 8.5 cm. long, it is filled with soft, yellowish-white, granular material, about which, in places, the enveloping bone is rough and friable. This grayish tissue in the medullary cavity gradually passes into a pale, œdematous tissue, beyond which the medulla is bright red.

**FEMUR, ELBOW JOINT AND ULNA.** The bones are sawed through longitudinally. On the inner aspect of the lower end of the humerus there is an irregular area, 2.4 by 2.5 cm., throughout which the bone is absent, and into which a probe passes when inserted into the skin sinus. At this point, the base of this opening is soft, pale grayish-red and bathed in a thick puriform material. The underlying medulla shows an area, 4 cm. long, throughout which is a soft, granular, grayish-white tissue. The synovial surface of the elbow does not appear to be involved and the cavity is free from exudate.

The brain shows no macroscopical lesions. The middle ears and basal sinus are normal.

#### ANATOMICAL DIAGNOSIS.

Generalized blastomycosis.

Blastomycosis of the skin, bones, peritoneum, lymph nodes, pleuræ, and lungs.

Generalized blastomycosis of the kidneys.

Chronic obliterative pleuritis.

Blastomycosis of the left adrenal, prostate and œsophagus.

Microscopically, the lesions in the various organs show the same general process and are illustrated in the photomicrographs and

drawings. There is necrosis of the tissues, cellular infiltration, giant cells and many spheres with definite encapsulating membranes. The organisms are very numerous and are seen both extracellularly and within the cytoplasm of the giant cells. The number of the giant cells varies; some sections contain only one, others eight or more. The organisms appear in the tissues as round bodies which have a sharply outlined, limiting capsule. They show various stages of budding. No mycelia, or spheres containing spores, as seen in dermatitis coccidioides, were found in the tissue.

The organism was recovered in cultures several times from the subcutaneous abrasions during life and from several of the lesions at post-mortem examination. It grows best on sugar-containing media, beneath rather than within the thermostat. In five days, small colonies, similar to those of *Oidium lactis*, are visible. Microscopically, they consist of branching mycelia. The growth becomes incorporated with the superficial layers of the media. The lesions produced in mice are well shown in the gross specimen.

#### DISCUSSION.

DR. ORMSBY said he was very pleased to hear the report of a case of this disease from some point other than Chicago. In 1907, when they reported twenty-seven systemic cases and showed the effects of animal inoculation, he believed that everyone was convinced that blastomycosis was a disease *per se*. In their first few cases they were not able to find the organism in the sputum, but it was readily found there in the later cases. The organism producing the disease had been found invading practically every tissue and organ of the body; it was found in all of the internal organs, in the bones, the cerebrum, cerebellum, the prostate gland, etc.

Many of these cases in the past, Dr. Ormsby said, had unquestionably been mistaken for tuberculosis. Last winter, in the Tuberculosis Hospital, connected with the County institutions, they found a typical case of systemic blastomycosis that had been there for some time and had been looked upon as one of tuberculosis. Many of the cases reported from Chicago were importations from surrounding States, especially from Indiana and Wisconsin, which showed its widespread distribution.

DR. GILCHRIST said the probabilities were that there were a good many cases of blastomycosis distributed over this country that were unrecognized. The important point was the recognition of the disease during the early stage, and the failure to do this indicated a lack of microscopical examination in suspicious cases. If the disease were recognized early, the outlook was favorable. In the more advanced cases, where marked glandular involvement had ensued treatment seemed to be of no avail, either with potassium iodide, the specific vaccine or the X-rays.

DR. RAVOGLI referred to a case of general blastomycosis where the disease had existed for over four years. The patient was a man, who was employed as a butcher in a slaughter-house. He was long addicted to the excessive use of alcoholics. He neglected treatment and the disease began to make its way in

the lymph glands and in the mucous membranes. He had several abscesses and finally developed an abscess in the retro-pharyngeal region from which he died with blastomycetic septicæmia. At the autopsy the bones were found affected and typical cultures of the organism were obtained from the marrow and from the abscesses.

DR. SHEPHERD said that in the case he had reported, every organ in the body was affected with the exception of the brain. About six months previously, he had had another case in the hospital, which was not recognized until it reached the post-mortem table. Prior to that, it had been regarded as a case of tuberculosis. This was probably only one of many such instances.

## SOCIETY TRANSACTIONS

### NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, May 23, 1911.

WILLIAM B. TRIMBLE, M.D., *President*.

#### Epithelioma Treated with Acid Nitrate of Mercury. Presented by DR. SHERWELL.

Dr. Sherwell showed six cases of extensive and deep cases of epithelioma—two of which had previously been shown before the Society—demonstrating cure, positive benefit in some cases, and apparent benefit in others, these results having been obtained by deep and efficient curettage and application of acid nitrate of mercury.

DR. BRONSON said that the results were most interesting, although too recent in some of the cases for any conclusions as to ultimate result.

DR. MORROW thought that one of the eye cases presented a very brilliant result, but in the case of cancer of the orbit and the one involving the ear he thought that the prognosis was unfavorable. This opinion was by no means a reflection on Dr. Sherwell's treatment. He thought that Dr. Sherwell deserved a great deal of credit for the boldness with which he attacked these cases which were not amenable to ordinary treatment, and the results were certainly as good, if not better, than could be obtained by any other treatment.

DR. SHERWELL said that he had presented all the cases at one time, as he did not wish to take up the time of the Society. The prognosis was somewhat doubtful in two of the patients. They were, however, the hopeless sort of cases, and had been sent to him as such. The orbital case had been curetted to the periosteum of the orbit. The ear case in which the whole of the ear was affected as well as the side of the face up to the lower eyelid, had been under all sorts of treatment for eight or ten years—X-ray, radium, high-frequency current and every thing that could be thought of, and nothing had done any good. They had really been sent to him as "dares", and he had so considered them. He was rather of the opinion that the orbital case would prove a cure, but was less sanguine in the other case, although he did not consider that hopeless by any means. In this one he was compelled to curette down to the





FIG. 1.  
Generalized Blastomycosis.  
Lesion on face.

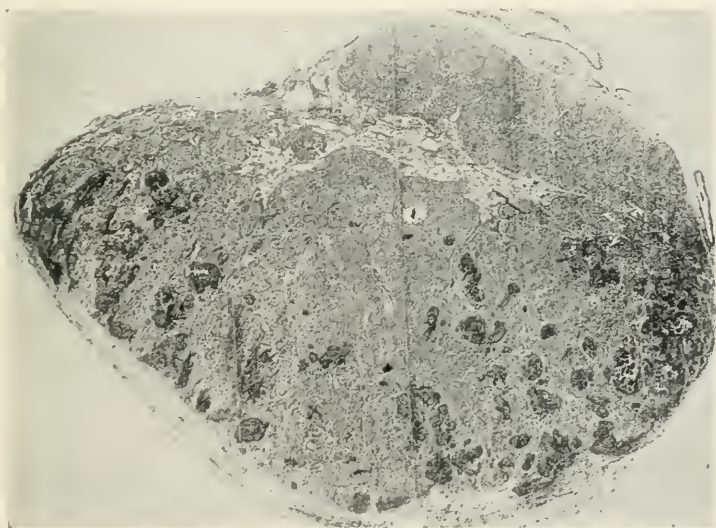


FIG. 2.  
Generalized Blastomycosis.  
Cross section of mesenteric lymph node. The small, irregular-shaped,  
dark areas are miliary abscesses.



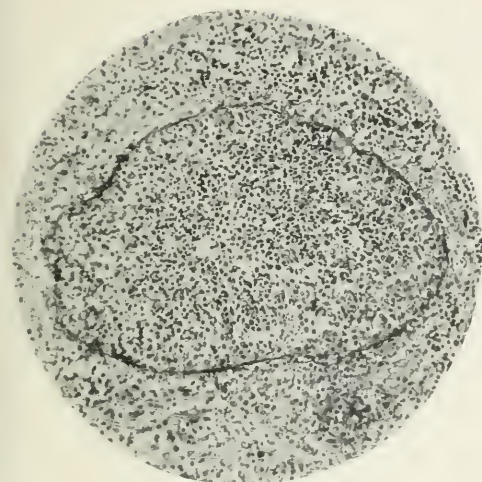


FIG. 3.

Generalized Blastomycosis.

Low power—showing single miliary abscess of lymph node. A large giant cell containing two organisms is seen at the upper, right-hand border of the abscess, and several other organisms can be seen in the section.

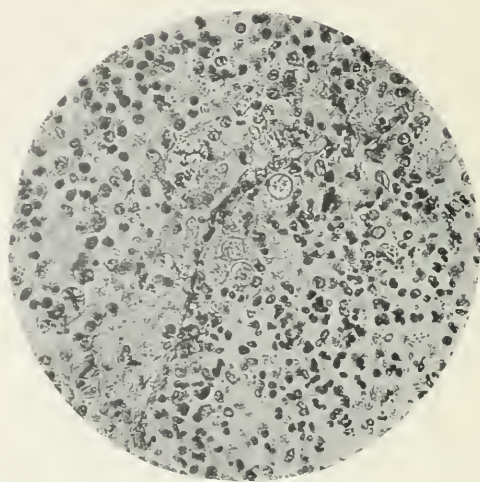


FIG. 4.

Generalized Blastomycosis.

Higher power than Fig. 3. Peripheral portion of miliary abscess of lymph node. Several organisms can be seen.

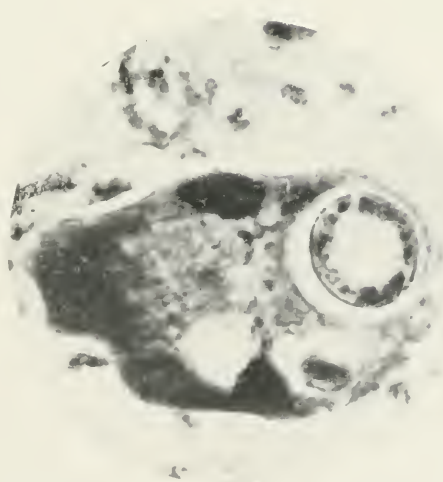


FIG. 5.

Generalized Blastomycosis.

Giant cell with one organism in it. Stained with Mallory's connective-tissue stain. The narrow, white zone around the central, circular, darker-staining area is the peripheral capsule.



Eustachian tube and into the mastoid process. He felt, however, that the treatment had benefited the patient, if it had not cured him. The other four cases he considered as cured. The eye case in which the lid and sclerotic membrane were affected was certainly a very pretty one, and was so considered by the ophthalmologist who had referred it, and who was still observing it. The patient was entirely normal now and had been so for over three years.

In reply to a question by Dr. Morrow concerning the depths of the effect produced by the acid, Dr. Sherwell said that the effect went rather deep. The acid itself did not penetrate more than a sixteenth of an inch, but that the effect of the inflammation produced was of the greatest possible benefit in destroying the microscopical portion of the malignant tissue.

The scab was always allowed to remain as long as possible, as the cosmetic effect was much better. He thought that the cosmetic, as well as the curative effect in the case sent to him by Dr. Johnston would be perfect. In this instance the acid had been allowed to remain on as usual, for fifteen or twenty minutes, and then neutralized, and the scab was allowed to remain untouched. Of course, in these cases of deep curettage, complete anæsthesia was necessary. In two of these cases the men were under ether for perhaps an hour and a quarter. In both these cases considerably over a dram of the acid was used.

#### Case for Diagnosis. Presented by DR. G. H. Fox.

The patient was a young lady with an annular lesion on the cheek and a nodule on the opposite temple. A prominent surgeon had diagnosed the case as tuberculosis and had suggested operation. No definite history had been obtained. The case was presented for diagnosis and suggestions for treatment.

DR. WHITEHOUSE said that if he were to venture a diagnosis on a first examination he would feel that the condition was more like a lupus vulgaris than anything else. Before pronouncing a definite opinion, however, he would wish to examine the case carefully by daylight.

DR. KLOTZ said that the case impressed him as a superficial form of lupus.

DR. ROBINSON said that he did not feel prepared to make a diagnosis by artificial light, but he did not believe that it was lupus vulgaris. There were nodules more or less isolated, some rather hard, but there were no signs of new lesions in the scar tissue or outside the generally infiltrated margin, such as one would expect in most cases of lupus vulgaris. He would consider the question of lues, as well as tuberculosis and would suggest a Wassermann test.

DR. SHERWELL said that he had made a very cursory examination, but thought he had recognized an induration like that noted in scleroderma.

DR. HOWARD FOX had had the opportunity of examining the patient a number of times. In a dispensary case, presenting as she did a circinate group of dull-colored, fleshy nodules, the diagnosis of a tubercular syphilide would probably have been made at once and the patient put upon anti-syphilitic treatment. In this particular case the history and the social condition should weigh somewhat against such a diagnosis. Dr. Fox thought the eruption might be a superficial form of tuberculosis. It was certainly not an ordinary case of lupus, there being no apple-jelly nodules or scarring.

DR. KINGSBURY said that without a history and with only a superficial examination, he would hardly venture a positive diagnosis. The question of syphilis, however, should be excluded before any other disease was considered.

DR. TRIMBLE said that he had made a rather cursory examination of the case,



but he also had taken into consideration what Dr. Sherwell had just said about scleroderma. It looked very much like the atrophy that occurred in morphœa. He would not venture a diagnosis, though he thought erythematous lupus should be considered. It looked not unlike some cases of nodular lupus erythematosus.

Dr. G. H. Fox said that he was sorry the members could not see the case in daylight, as it was rather an important one. The diagnosis of erythematous lupus had not occurred to him, but he thought that could be left out. Neither had morphœa occurred to him, as there was a purplish color. He did not take the diagnosis of lupus vulgaris seriously for the lesions were not of that type; they were firm, solid, fleshy lumps in the skin. When he first saw the patient there was a distinct ring about an inch in diameter. On seeing her the second time, the infiltrated ring had broken up into isolated nodules of a dull-red color, and it seemed to be a case which in any young woman with a history of syphilis would be regarded as typical. It looked very much like a tubercular syphilide of the cheek. Dr. Fox said that he would be very glad to have some of the members examine the lesion in the daytime, and give him the benefit of a daylight judgment. He had not been able to go particularly into the history, but he had not learned anything to suggest infection, though that might have occurred in the usual way or innocently. A Wassermann test had been made, but the result was negative. A tuberculin test had been suggested, but the patient had declared that though she did not object to blood being taken from her veins, she did object to anything being injected into the tissues, so that no tuberculin test had been made.

#### Case for Diagnosis. Presented by DR. TRIMBLE.

The patient, who had been previously presented by Dr. Fordyce, had a lesion on the face which had been troubling her for seven years, and had of late been increasing very rapidly. When she first presented herself at Dr. Fordyce's clinic it had existed for four years, and was about half the present size. At that time the diagnosis was uncertain, some considering it lues, others, erythematous lupus. She was treated for six months with anti-luetic treatment, and the lesion practically disappeared, but later recurred; since which time anti-luetic treatment had produced no result at all. Finally this treatment was stopped, and a Wassermann test was made, which gave a mild positive reaction. Subsequent reactions, however, had been absolutely negative. She had been treated with injections, inunctions, and every form of anti-luetic treatment. It was suggested that she be given salvarsan, but when Dr. Fordyce presented her last winter there was so much difference of opinion as to the diagnosis that it was thought best not to give it. In the last few months the lesion had spread considerably and had taken on a much brighter appearance. At one time while under treatment, there had been a circinate lesion on one thigh, which later disappeared. The condition now resembled lupus erythematosus more than anything else.

Dr. HOWARD FOX thought that syphilis could be excluded, not from the negative Wassermann reaction but from the failure of persistent anti-syphilitic treatment. He was inclined to the diagnosis of lupus erythematosus.

Dr. BRONSON said that only in distribution was there a suggestion of erythe-

matous lupus. It seemed to him too inflammatory for the disease with too much infiltration and elevation of the borders and, moreover, there was no healing.

Dr. MORROW agreed with Dr. Bronson that the localization and contour of the patches were typical of lupus erythematosus, and asked if he was correct in understanding Dr. Trimble to say that they had cleared up under the influence of specific treatment.

Dr. TRIMBLE replied that at one time the case had improved fully seventy-five per cent. under "mixed treatment." This was when she first presented herself at the hospital. As at that time the Wassermann test was not known, she was put on the therapeutic test, and when the condition cleared up, as it did, the diagnosis was accepted as unquestionably correct. Some part of the lesion, however, still persisted, and when she stopped treatment for a month it increased in size, and the disease continued to progress. Since that time the "mixed treatment" had produced no effect whatever.

Dr. SHERWELL thought it was a case of erythematous lupus.

Dr. SCHWARTZ was inclined to think there was some ulcerative process in the nose as it was not uncommon to see such recurring erysipeloid attacks due to a lymphangitis arising from this source.

Dr. ROBINSON said that at present he failed to see any objective sign of erythematous lupus.

Dr. KLOTZ said that the case did not show any specific character now. The inflammatory process was very marked and rather suggested erysipelas.

Dr. G. H. Fox said that he did not think it was erythematous lupus. Neither did he consider it syphilitic, the failure of treatment would seem to eliminate that. He agreed with Dr. Schwartz that it was probably due to some repeated infection through the nasal mucous membrane. He recalled several cases involving one side of the nose, which were due to such a cause, and he was inclined to believe that in this case there was some process inside the nose which was the origin of the trouble, and of its recurrent and erysipeloid character.

Dr. TRIMBLE said that at the time when they failed to cure what might be called the first relapse, the idea was suggested that it might be due to some chronic infection from the nasal mucosa, and the attending rhinologist examined her with that in view, but found nothing. She had also been recently examined by a nose and throat man; very carefully, but he found absolutely nothing in the nose.

#### Late Secondary Lues. Presented by Dr. TRIMBLE.

In this patient the lesions had existed for a year. The Wassermann test was made before any treatment was instituted, and was clearly negative, and several subsequent tests had all been negative. Another interesting point was that anti-luetic treatment had produced no effect upon the condition. The patient gave a history that seven months prior to this eruption she had had an abscess of the vulva, and was treated in Bellevue Hospital, where they kept her for one night and then sent her home. The present lesions were very slightly scaly at times. There was no itching.

Dr. KLOTZ said that since syphilis seemed to be excluded it might be a tuberculous process.

Dr. DADE said that he thought it certainly a case of psoriasis.

Dr. WHITEHOUSE considered that it was a circinate syphilide.

Dr. TRIMBLE said that perhaps he should not be too positive about its being a luetic trouble, although he had been studying it for months. The possibility

of its being psoriasis had not been considered. There had been some slight scaling. He had not excluded syphilis on account of the negative Wassermann, for he had seen quite a number of cases that gave a negative Wassermann which afterward cleared up under anti-syphilitic treatment.

**Case Treated by Salvarsan.** Presented by DR. WHITEHOUSE.

Dr. Whitehouse said that this patient had been presented at the last meeting of the Society by Dr. Fordyce, who had made a biopsy of the skin lesions, and had made various tests, whereby he had eliminated actinomyces, blastomycosis, and sporotrichosis. The Wassermann test was negative, as was also the Moro tuberculin test. The following day the patient came to the Skin and Cancer Hospital. He had never been given any mercury, but had been treated with tuberculin injections. Another tuberculin test was made and it was negative, but the Wassermann reaction was this time positive, and on the strength of that, he was given an intravenous injection of salvarsan, although another specimen of the blood was reported negative five days after the first one, and before the injection of salvarsan. On May 8th he was given five decigrammes intravenously, and on the 13th, five more decigrammes were given intramuscularly in iodipin emulsion. There was no reaction. Since receiving the injection the lesion had healed, leaving only the mark made by the biopsy. The case was presented to learn the opinion of the members as to the effect of the salvarsan. It certainly had done no harm; on the other hand it had so far improved the lesions that it seemed to him fair proof that the condition was syphilitic.

DR. BRONSON thought it was a case of syphilis.

**Keratosis Follicularis.** Presented by DR. G. H. FOX.

Dr. Fox said that he had seen the patient only once, but the case was a most interesting one, and he had asked the patient to come to the meeting in order that he might ask for suggestions as to diagnosis and treatment. The patient, of middle age, was of a nervous temperament, and the eruption followed a severe mental strain. Ten months ago, the patient had lichen planus upon the hands and inner surfaces of the thighs. At the same time scattered bullæ appeared on the chest, thighs and legs. Soon after, the spinous lesions appeared around the waist and upon the lower extremities, showing a tendency to occur in groups. They were stiff and painful at first, but recently had grown softer and less sensitive.

DR. ROBINSON said that it was a question in his mind whether it was a keratosis follicularis as usually understood by that term; the case did not present to him the large pea-sized papules with more or less fatty crusts seen in most well-marked cases of Darier's disease. He would like to search for and find the so-called psorosperms before accepting the diagnosis. In a recent example of Darier's disease the psorosperms enabled him to settle a case of very doubtful

nature, therefore he would not exclude a Darier in the present case without a microscopical examination excluding it.

Dr. G. H. Fox said that he had not had time to examine the patient carefully, having seen her only once. The question had occurred to him whether it was the true Darier's disease, or the lichen spinulosus of Devergie. He hoped to have an opportunity of showing the case again. It was certainly a most remarkable case.

The speaker said that another interesting point was the appearance from time to time of bullæ which seemed to be unconnected with either of the other diseases mentioned.

#### **Lupus Vulgaris.**      Presented by DR. KINGSBURY.

The patient was a stenographer, twenty-eight years of age, born in Belgium and had been in this country only a few months. The nose had been affected for nearly five years. About six weeks ago there were numerous nodules and some crusting. The condition had been considerably improved by rather frequent applications of a caustic paste.

#### **Epithelioma.**      Presented by DR. KINGSBURY.

The patient was a woman, forty-one years of age. On the left cheek, just in front of the ear, she presented an irregularly shaped lesion which was about an inch wide and one and a half inches long. There was superficial cicatrization, soft nodules, and characteristic epithelioma pearls. According to the woman's statement it had been present for fifteen years, and she had been treated in different dispensaries for lupus vulgaris and for lupus erythematosus.

#### **Xeroderma Pigmentosum.**      Presented by DR. HOWARD FOX.

The patient was a man twenty-six years of age. No member of his family had ever suffered from a similar disease. Four years ago, he worked for two years as a conductor on a surface car. With this exception he had always had indoor employment as a clerk or factory hand. He had always been very fond of fishing and had spent most of his leisure time fishing along the wharves. He did not know how long the atrophic spots or telangiectases had existed. He had first noticed the freckles nine years ago. These had remained continuously since then, being worse in summer after exposure to the sun. The "rough skin" on the cheeks had existed for a year and the epitheliomata on the nose for about eighteen months.

The eruption was confined chiefly to the nose, cheeks and forehead, the backs of the hands being entirely free. It consisted of numerous, discrete, pinhead or larger freckles, and of a moderate number of atrophic, depressed spots, pinhead and larger in size. Upon the cheeks



were numerous, slight, keratotic spots and on the nose a half dozen superficial epitheliomata. The general health was apparently good.

DR. DADE disagreed with the diagnosis. The case was certainly now in an epitheliomatous condition, but the lesions were confined to the face around the nose, where, following keratosis, this condition was not uncommon in persons exposed to the elements as this man was for two years; the same condition was often seen in sailors.

DR. G. H. FOX stated that he had not seen the case before, but there seemed to be atrophic spots and pigmentation and telangiectases and, finally, an undoubted epitheliomatous growth on the nose, so that the diagnosis was apparently justified.

DR. WHITEHOUSE agreed with the diagnosis.

DR. ROBINSON disagreed with the diagnosis and said that there was a more or less rosacea condition with keratosis. In xeroderma pigmentosum the dilated capillaries and the atrophic condition go hand in hand, and the pigmentation was more marked than in this case. Apart from the localization, which is against the xeroderma pigmentosum, a keratosis of the face was not at all infrequently followed by epithelioma. He would make a diagnosis of a rosacea and a condition of keratosis, and later carcinoma.

DR. TRIMBLE agreed with the diagnosis, and said that the patient presented all the classical signs, and that it would be somewhat unusual to have epithelioma at twenty-seven. The case showed the telangiectases, the atrophy, the freckles and the keratotic lesions.

DR. KINGSBURY agreed with the diagnosis.

DR. HOWARD FOX agreed with Dr. Robinson that the case was not a typical one, there being no lesions upon the hands. The atrophic spots were, however, certainly present and with the rosaceous condition, the lentigines, the keratoses and epitheliomata, the complete picture of xeroderma pigmentosum seemed to be presented.

DR. BRONSON inquired if any one had ever observed xeroderma pigmentosum *de novo* in the adult.

DR. G. H. FOX said that certainly the cases presented by Taylor, White, and others were the type of true xeroderma pigmentosum. Cases that he had seen in adults, although differing in appearance from the type developing in childhood, ought not to be regarded as a distinct disease, but only the same condition occurring later in life, and usually in a less developed form.

#### Alopecia from Favus. Presented by DR. KINGSBURY.

The patient was a Russian Jewess, probably forty years of age. There was considerable loss of hair on top of the scalp, with rather extensive but superficial cicatrization. There was no satisfactory history of previous disease of the scalp, but the baldness was of more than twelve years' duration. The nail of the middle finger of the right hand presented the clinical picture of an onychomycosis.

DR. BRONSON said that the appearances were not those usually seen in alopecia following favus. In the latter there was more of a sclerosed condition, with here and there little tufts of coarse hairs. The present case rather suggested some trophoneurotic disease.

DR. SHERWELL said that he had never seen a case of alopecia following favus resembling this. It did not seem to him like the classical baldness following favus.



**Case for Diagnosis. Presented by DR. KINGSBURY.**

Dr. Kingsbury said that the patient had been presented at the last meeting, when several of the members thought the condition was an atypical lichen planus, and others were noncommittal. She had had no treatment during the past month that was likely to make any impression on the lesions and the case was again presented for diagnosis. Her hair had continued to fall, although not as much as previously.\*

Dr. HOWARD FOX had not changed his opinion, expressed at the last meeting, that the case was one of lichen planus. The diagnosis could have been readily settled by a biopsy.

Dr. SHERWELL said that he had thought it a case of lichen planus at the last meeting, and was still of that opinion, although the location was unusual.

Dr. MORROW doubted the diagnosis of lichen planus on account of the localization.

Dr. ROBINSON said that he had been interested in somewhat similar cases in the last three months; one of the patients having a condition much like this was presented at the Academy of Medicine—and it was a question whether or not it was lichen planus, or an inflammatory process in connection with the follicles. The location was similar to this on the arm, and there were also lesions on the abdomen and in the axillæ. There were many lesions which looked exactly like those of lichen planus. In that case which will be published by Dr. D. Orleman Robinson, there were black comedo-like spots in very many lesions which were not present in this patient. A biopsy was made and the condition was shown to be an inflammatory process, starting in connection with the follicles, and apparently from staphylococci. Accordingly, lichen planus was excluded, but the case showed that one might have lesions something like the old classical lesions of lichen planus in certain follicular inflammations. From the observation of that case, he would say that the present one was not lichen planus; and he thought that a biopsy would show the correctness of this view. As Dr. Morrow had suggested, there was an infective character present. The speaker would make a diagnosis of folliculitis somewhat resembling a papular eczema and not lichen planus.

Dr. G. H. FOX said that at the last meeting he had claimed that shining papules alone did not prove any case to be lichen planus, but in this case there were some lesions that were as typical of lichen planus as any that could be seen. The peculiar localization was not like every lichen planus, but psoriasis did not always occur on the knees; neither did lichen planus always occur around the waist; this case was unique, and seemed to him to be the form of lichen planus described by Unna as lichen planus obtusus, the lesions being in a highly inflamed condition. He was inclined to think that it was a lichen planus with a staphylococcus infection added.

Dr. ROBINSON replied that the same arguments had been presented regarding the case shown at the Academy, three or four weeks before the biopsy was made.†

Dr. DADE said that he did not think it was a lichen planus but a follicular eczema, as he had said at the last meeting. The situation in the bend of the elbows, the bend of the knees, axillæ, and around the neck were hardly situations to which lichen planus would be confined almost exclusively.

\*A few days after the meeting a marked positive Wassermann reaction was obtained.

Dr. Kingsbury kindly transferred the case to Dr. Orleman Robinson and sections showed it was not a case of lichen planus but an acute folliculitis.

DR. KINGSBURY said that while he was unable to make a satisfactory diagnosis, he was still convinced that the case was not one of lichen planus.

**Tubercular Syphilide of the Palms.** Presented by DR. HOWARD FOX.

The patient was a woman, twenty-seven years of age, who had been seen a week before at the clinic. She then presented an eruption of both palms that looked strikingly like an early papular syphilide. The eruption consisted of numerous pea-sized, discrete, lean ham-colored, slightly elevated, roundish lesions, confined entirely to both palms. She gave, however, a straightforward history of infection five years previously and also presented a typical pigmentary syphilide of the neck. The Wassermann reaction was weakly positive. There were no other manifestations of syphilis. She was given an intramuscular injection of salvarsan a week ago.

DR. MORROW said that a late lesion of syphilis on the palms always presented the objective features of a secondary syphilide, and that on account of the anatomical disposition of the parts, the infiltrations and ulcerations found on other surfaces of the body would not be noted. These chronic tertiary lesions of the palms were almost identical in appearance with chronic eczema, and there was great difficulty in differentiating between them. There were always the circinate outlines, the borders of the patches, but so far as the lesions themselves were concerned, they were secondary in general character.

DR. WHITEHOUSE said that he recalled a case of a symmetrical syphilide of the palm after a twenty year infection. Once in a while one would see a case with absolute symmetry.

DR. KLOTZ said that he had now under observation a patient with symmetrical scaly lesions on both palms ten years after infection.

DR. HOWARD FOX said that the point he intended to bring out was the fact that a late tubercular syphilide could not only be absolutely symmetrical on both palms, but could closely simulate the early papular type of the disease. The action of the salvarsan had been much quicker than had been anticipated and the case did not show very well what he had hoped to demonstrate.

**Chancre of the Lip.** Presented by DR. KINGSBURY.

The patient was a woman, forty-three years of age, well nourished, and apparently in good general health. She had had a lesion in the centre of her lower lip for three and a half weeks. It began as the usual "cold sore" but the appearance was quite characteristic when the patient first came under observation. This was when the erosion was but two weeks old and a positive Wassermann was then obtained. When before the Society, the lesion was about the size of a dime and owing to a deep fissure was rather painful. There was but slight induration and not much enlargement of the submaxillary glands. The source of infection in this case might have been the woman's infant grandson who was also shown to the Society. The boy presented symptoms suggestive of hereditary lues and was said to have had patches on the tongue and lips at the time when his grandmother must have been infected.

**Lupus Erythematosus (Two Cases).** Presented by DR. KINGSBURY.

The first patient was a saleswoman, thirty years of age, who had had an eruption on her face for nearly five years. The lesions were on the nose, cheeks, ears, and chin. The case was of clinical interest on account of the peculiar circinate arrangement of the lesions on the chin. A Wassermann reaction was negative.

The second patient was a well-developed school girl, fourteen years of age, who presented a squamous eruption on the nose, cheeks, and right eyelids. Duration about seven months. A history suggestive of syphilis had been obtained from the mother, and at the clinic several of the physicians had regarded the case as one of lues. A negative Wassermann was obtained.

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**MANHATTAN DERMATOLOGICAL SOCIETY.**

February-March, 1911.

ALBERT C. GEYSER, M.D., *President.*

**Lupus Erythematosus: Two Extensive Cases Showing the Extremes of the Benign and the Malignant Types.** Presented by DR. GOTTHEIL.

Mrs. J. Y.; twenty-nine years of age. The disease began two years ago, following what was apparently an attack of facial erysipelas of great severity. Dr. Seymour Basch, who referred the case to the speaker said that the affection had been rapidly progressive, and had resisted all manner of external and internal treatment.

When presented to the Society, although there were only a few lesions that showed signs of activity at their margins, the patient's face, neck and ears were greatly deformed by extensive, depressed, yellowish-brown scars. Both cheeks were entirely occupied by elongated, oval lesions; the entire nose was scarred and stained. There were isolated quarter-dollar-sized scars on the forehead and scattered through the scalp; and both ears were badly affected. Only in a few places on the face were the margins of the lesions reddened or slightly tumefied or possessed of the characteristic scaling. On the shoulders and upper arms were groups of deep, brownish-yellow scars; but here the process seemed to have run its course.

As we were dealing essentially with the end results of a malignant and rapid type of the disease, treatment had been limited to the use of the solid carbon dioxide to the margins of the facial lesions that were

progressing; two applications had been made, apparently with good results. Dr. Gottheil again saw this patient in consultation with Dr. Basch on March 15th; she had had a sudden attack of illness, beginning with a very severe chill, followed by fever (rectal  $105\frac{1}{2}^{\circ}$  F.), swelling of the face, etc.

Examination showed the presence of a severe erysipelas, with very little superficial redness, but a diffuse swelling of the face and superficial suppuration (flat confluent pustules) of all the facial scar areas. The last CO<sub>2</sub> applications had been made on March 3rd, on the lower cheek on each side; the erysipelas began on March 12th, at the inner canthus on the right side. There was, therefore, no reason to suppose that there was any connection between the two. A great change in the lupoid process was now anticipated, though whether in the shape of retrogression or extension could not be predicted.

The second patient, Mrs. A. B., was thirty-nine years of age. She had had her trouble for eight or ten years, and had been treated by many physicians and at various institutions. She had, when first seen in October of last year, a very extensive lupus erythematosus affecting the face, forehead, lips, ears, neck, nose, and the chest. It was of the large discoid variety, but, though the scaling was marked, there was very little infiltration and hardly any atrophy at all. The treatment for the first six weeks had consisted of iodoform in grain doses three times daily, with a ten per cent. pyrogallol-vaseline externally. There was considerable improvement, which, however, stopped after a time. She was then placed on quinine, nine grains daily and a strong sulphur ointment, and the improvement was steady and remarkable.

When presented to the Society, her face was free from lesions and the only atrophy visible was on the nose, which was the first area attacked and may have been due to previous treatment. Her lips, however, were still scaly, and a number of new lesions had lately appeared on the chest. It was very questionable, in the speaker's mind, whether a cure would be accomplished on the lines indicated, though the patient was satisfied, her face having never been in anything like so good a condition since her disease began. The two cases emphasized the extreme difference that might exist between types of the same affection.

Dr. MacKee said that it was always a good idea to treat a case of lupus erythematosus, especially when the lesions were superficial, by some of the older methods, such as quinine internally and resorcin and other stimulating lotions and ointments externally, before resorting to the solid carbon dioxide. Not infrequently very simple measures would suffice and then the fact should not be overlooked that lesions of lupus erythematosus occasionally involuted spontaneously. The speaker mentioned a case of this disease that he had under observation at Dr. Fordyce's clinic. When the patient first appeared at the clinic there were three patches on the scalp and a slight atrophic scar on the right cheek, the remains of a former lesion. Suddenly a discoid lesion appeared on the nose, which was followed by the development of several similar plaques on

the backs of the hands. Within a month all the lesions began to involute spontaneously and the speaker predicted that they would entirely disappear within another month or two.

Dr. WISE said he saw a case occurring in Dr. Bulkley's service at the Skin and Cancer Hospital, in which the lesions disappeared from the arms and body without treatment.

#### Leucoplakia and Fordyce's Disease. Presented by DR. DITTRICH.

The patient was an Englishman, married, thirty-seven years of age, and an insurance agent by occupation. He had always been an excessive pipe smoker. There was no sign nor history of syphilis. When the patient first came under Dr. Dittrich's observation he presented a slightly elevated, infiltrated, pearly white, band-like lesion on the mucous surface of the left cheek, an eighth of an inch in width, and one-half inch long. The duration was uncertain. The lesion had been treated with chemical caustics and even with the actual cautery without relief. It was then cocaineized and the actual cautery applied until deep destruction resulted. This procedure appeared to have resulted in a cure. The patient also exhibited a mild type of Fordyce's disease, there being a group of about ten lesions.

#### Tuberculide. Presented by DR. MACKEE.

This patient, a Russian woman, had been presented at the October, 1909, meeting of the New York Dermatological Society by Dr. Fordyce and at the Academy of Medicine by Dr. MacKee on November 9, 1909. There had been, the speaker said, considerable discussion as to whether the case was a tuberculide or one of syphilis. When presented to the Society, there were several papules on the backs of the hands, varying in size from a pinhead to a split pea and one lesion on the forefinger was the size of the finger-nail. Some of the lesions were deep-seated and they were all undergoing central necrosis. There was some scar formation but no pigmentation. The lesions had only temporarily improved under vigorous anti-syphilitic treatment. The Wassermann reaction before mercury was given and again several months after its cessation was negative, while the Moro and von Pirquet tests were strongly positive. For the past two months the patient had exhibited a fissure at the commissure of the mouth which was surrounded by infiltration and scaliness of the epidermis, and an erythema and infiltration of the nares. These bore some resemblance to syphilis, but an examination for the spirochæta pallida had proven negative.\*

Dr. GORTHEIL said that whatever the case might have been, at the present time there did not seem to be a basis for any diagnosis other than that of tuberculide; there was no resemblance to any form of syphilis.

\* These lesions disappeared in one week under the influence of a ten per cent. ointment of ammoniated mercury.



DR. PAROUNAGIAN said he was satisfied with Dr. MacKee's diagnosis in so far as the lesions on the arms were concerned, but he stated that the lesions on the lips and nose looked to him like syphilitic manifestations.

DR. MACKEE said that with the exception of an indefinite history of a tumor of the neck, completely involuted under "mixed treatment," and the fact that there had been two miscarriages, there was nothing to make him believe that this woman was luetic. In reply to inquiries the speaker said that the case had been under his observation for two years and that the lesions had been practically the same throughout this period. There had been some non-ulcerating, deep-seated nodules on the flexor surfaces of the legs, below the knees, that had nearly disappeared, but they had left deep pigmentation. The speaker was inclined to believe that these were a part of the general process, although it was possible that they were indirectly due to varicose veins as suggested by Dr. Pollitzer. There were not, however, any very marked varicosities. Regarding the mouth and nose lesions, the speaker said that they were of recent development and he thought that they probably represented a pyogenic dermatitis and that they would disappear under the influence of white precipitate ointment.

#### Hypertrichosis Treated with the X-Ray. Presented by DR. GEYSER.

The patient was a female, twenty-five years of age. The growth of hair on the face began five years ago and she had been treated by electrolysis for two years after which the condition was as bad, if not worse than at the beginning. The electricity appeared to markedly stimulate the growth of the fine hairs. For the past year, to keep herself presentable, she had been compelled to use the various depilatories. The X-ray was first employed three months ago, since which time she had received two applications each week. The direct contact method with the Cornell tube was used. The duration of the treatments was twelve minutes. When presented to the Society, the patient exhibited a total loss of hair in the regions treated. The speaker said that treatment would be continued for another month so as to insure a permanent result. He had a number of cases that had been treated, two, three and four years ago, in which there had been no relapse.

DR. GOTTHEIL said that the time had come, when we ought to be in a position to arrive at some definite conclusions as to the utility and advisability of employing radiotherapy in this affection. Proclaimed at first as an unfailing depilatory agent, the bad results in the way of a radiodermatitis, scarring, and atrophy that occurred in many of the earlier cases, had caused the method to be largely rejected; and to the speaker's knowledge many prominent workers in this field refused to use it at all in this affection. Nevertheless, some of them had continued to employ it, and claimed to get satisfactory results. The speaker said that he had had the opportunity, a day or two ago, to see one of Dr. Geyser's cases, in which a perfectly smooth, normal, and hairless skin had been the result of long-continued treatment with the Cornell or contact tube. It had taken a year and a half to effect this; but the patient was perfectly satisfied, and indeed, except for a small scar in front of one ear due to an accidental thermic burn, the result was a beautiful one. Here was another case of the same kind, shown by Dr. Geyser, in which the result was almost as good. The conclusion was, there-

fore, that it was perfectly possible, with proper technique, to effect permanent depilation without any ill effect at all. In view of the great tediousness and difficulty of the electrolytic method when the hair growth was at all extensive, this was a matter of great interest; and the speaker asked Dr. Geyser to explain the method he employed more fully, and to say if the two cases mentioned were exceptional in any way, or if similar results were the rule. It was true that almost all the operators who had rejected the method had used large and powerful tubes at a distance from the area treated. In regard to electrolysis being painful and causing scars, Dr. Gottheil said that the pain depended largely upon the technique; if too heavy a milliamperage was used, if the needle was thrust through the skin and not introduced alongside the hair into the follicle, or if the current was on when the needle was introduced, unnecessary pain would result. Visible scarring, also, was occasioned by excessive and unnecessarily severe electrolysis. There was some destruction of tissue, of course, at each insertion of the needle, but it was very minute, and subcutaneous, and it would not lead to visible scarring if too many neighboring follicles were not treated at one and the same time. Of course, when thousands of hairs were removed in a single case, the immense number of minute subcutaneous atrophies might lead to a slight general depression of the surface, but not to anything that could be called a definite scar.

Dr. WISE said that he preferred the use of the epilating needle.

Dr. MacKEE said that the result as shown in Dr. Geyser's case was certainly most excellent. The hair, however, would return and it would be necessary to obtain a second or even a third alopecia before it would be permanent. And this was the cause of the difficulty in treating cases of hypertrichosis with the X-ray. By employing the direct contact method as advocated by Dr. Geyser, especially with the small tube, one obtained a minimum amount of ray and the anode being so close to the skin, gave the soft rays an opportunity to penetrate through the epidermis without so much absorption as when the tube was placed at a distance. The same result could be obtained by having the rays originate from a distance and allowing them to pass through a suitable filter such as leather, chamois, cotton, aluminum, etc. It was, after all, not so much a question of method as of dosage. It required just so much ray to make the hair fall out in any given case, no matter how applied. If the maximum of the influence of the Roentgen ray could be exerted upon the follicles with a minimum action on the epidermis then the alopecia would be produced without any, or very little erythema which, of course, should be the result desired. In producing alopecia two or three times, as was necessary in hypertrichosis, telangiectases, scarring and permanent pigmentation would be avoided if no erythema were produced, but a certain amount of atrophy would be likely to manifest itself, especially around the commissures of the mouth, on the lips, and on the chin.

Dr. GEYSER, speaking of electrolysis, demonstrated to the Society a means by which the hairs upon the face would become more distinctly shown, so as to take the strain off of the operator's eyes, and the electrolytic needle used with greater facility. A lighted taper, or even a burning match, was to be applied to the under side of a china saucer until a deposit of lampblack had appeared, then this was mixed with a drop of sweet oil, forming a paste. This was carried by the finger to the spot about to be operated upon and thoroughly rubbed in, the excess being removed with a pledget of cotton, when each follicle would have the appearance of a comedone and the needle would easily be guided into the opening. The resulting pain and scarring was less because of the oily insulation at the skin contact.

Case for Diagnosis. Presented by DR. PAROUNAGIAN.

This was the patient with the lesion on the penis, who had been presented at the December, 1910, meeting, of the Society. At that time it was his opinion that the lesion was syphilitic, but Dr. MacKee was the only one who concurred in this belief. Since the last meeting the patient had been receiving vigorous anti-syphilitic treatment as a result of which the lesion was now entirely healed.

Lupus Erythematosus. Presented by DR. DITTRICH.

The patient was a male, fifty-five years of age, single, and a cashier by occupation. A triangular-shaped lesion, with the apex directed down, of twenty years' duration was exhibited over the left malar bone. The patch was violaceous in color, superficial, slightly scaly and presented only slight atrophy. The case was remarkable in that only one lesion had ever developed, which had existed for twenty years without extending or producing much disfigurement.

Syphilis Hereditaria Tarda. Presented by DR. GOTTHEIL.

This patient, who was a small boy, had a sister who presented exactly the same condition. The main feature of the case was the presence of the Hutchinson teeth.

Epithelioma of the Nose. Presented by DR. GEYSER.

The patient was a female, fifty-four years of age. The lesion on her nose developed five years ago as a small, scaly or crusted papule. It remained more or less stationary for two years and then began to ulcerate. The patient first came under the speaker's observation one month ago, at which time the entire right side of the nose and a part of the cheek were involved in an extensive ulceration which would bleed profusely upon the slightest provocation. The nose itself was very much swollen. The treatment had consisted of two thirty-minute applications, each week, of the X-ray applied through means of the Cornell tube in direct contact with the skin. When presented to the Society, the lesion was undergoing rapid involution. There was no erythema as a result of the Roentgen ray.

DR. GOTTHEIL said that clinically the case, as it looked at present, showed none of the distinctive marks of cancer of the skin, either in its border or its base; it looked more like an exulcerated gummatous condition.

DR. MACKEE said that the duration would speak against lues and he thought he saw evidence of the pearly induration so common in epithelioma.

**Syphilis Hereditaria Tarda: Grouped Papulo-Squamous Lesions of the Palms and Soles.** Presented by DR. GOTTHEIL.

Harry S.; fifteen years of age, Russian; eighteen months in the United States. The lesions had been present about two years, had been gradually but very slowly increasing in size, and consisted of large circular aggregations of papules occupying the central portions of the palms and soles. The individual tumors were large, pea to bean-sized, flat, dull-red papules, with a very moderate amount of scaling. The central portions of the affected areas were clear, without any noticeable atrophy and at various points on the tubercular margin there was a good deal of thickening and cracking, especially at the natural folds of the skin. The patient stated that the affection began in the central portions of the palms and soles, spreading gradually and clearing up in the centre. Subjective symptoms were entirely absent; so, also, were any stigmata of heredo-syphilis. The patient was well developed and well nourished, and his mentality was above the average, as was shown by the good English he spoke after so short a residence here. His integument presented no scars; his incisors were normal; his nasal bridge was not depressed, and there were no eye or ear lesions.

Keratosis of any type could be excluded by the fact that the lesions were markedly confined to the central portions of the palms and soles; the ball of the foot, and the heel, for example, being entirely normal. Psoriasis could be excluded by the size and character of the tubercles, the small amount of scaling, the peripheral growth of the groups of tubercles with central retrogression, and the absence of any trace of psoriatic lesions elsewhere on the body. Acquired syphilis was unlikely from the absence of any history or signs of the earlier stages of the disease.

DR. KINCH said that these lesions were too dry for lesions of eczema as some one had suggested. He stated that those in the border were distinct papulo-squamous lesions, which he thought were manifestations of syphilis, probably hereditary, in a child of that age.

**Bazin's Disease.** Presented by DR. MACKEE.

This patient was presented at the February, 1911, meeting of the New York Dermatological Society by Dr. Fordyce. The case was a typical one of Bazin's disease, the main feature of which was the fact that one of the lesions was undergoing extensive ulceration. The Wassermann reaction which was made by Dr. Howard Fox was negative and the Moro tuberculin test was strongly positive.

DR. WISE said that the French authors described two types of this disease—the ulcerating, and the non-ulcerating.

DR. MACKEE said that most of the cases of Bazin's disease that had been treated in his and in Dr. Trimble's services at Dr. Fordyce's clinic had presented one or more ulcers. He saw no reason why the cases should be divided into



ulcerating and non-ulcerating in order to definitely represent types of the disease. The lesions probably suppurated through the influence of vascular changes and secondary infection. In other words they might undergo involution through absorption or suppuration. In response to inquiries Dr. MacKee said that Bazin, in his original description of the disease, had not mentioned the fact that the nodules might undergo ulceration, which was now a well-known fact. The speaker said that he had never seen or heard of a case where all the lesions underwent suppuration.

### Epithelioma of the Eyelid, Showing Result of X-Ray Treatment.

Presented by DR. GEYSER.

The patient was a male, about fifty years of age. The lesion, which was the size of a silver dollar, began fifteen years ago. Two years ago the ulcer disappeared under twelve X-ray treatments, but it recurred after eighteen months. The Cornell tube was again applied and when the patient was presented to the Society the lesion had practically disappeared.

DR. GOTTHEIL said that this was by no means a cured case; the epitheliomatous infiltration was marked and characteristic all around the edges of the lesion. As in all the cases treated in this way that he had seen, it was manifest that improvement only had been effected. In most cases there was not even an apparent cure when the patient was exhibited; in others the disease reappeared in a comparatively short time. In a general way the results obtained in this manner were less satisfactory, both as regards immediate effect and permanence, than those produced from appropriate caustics. Nevertheless, in very old people where non-painful measures were essential, and where a temporary result sufficed, and also in certain locations, as on the eyelids, the treatment was advisable. The speaker desired to confirm the good results obtained from the acid nitrate of mercury, as used so successfully by Dr. Sherwell, in just such cases.

### Lupus Vulgaris, Showing Result of X-Ray Treatment. Presented by DR.

WISE.

C. K.; forty-nine years of age; Austrian by birth. This patient was from Dr. Fox's clinic at the Skin and Cancer Hospital. The disease began in the middle of the cheek fifteen years ago, and had been treated with various ointments and plasters without benefit. X-ray treatment was instituted one and one-half years ago, since which time she had received one exposure each week. The lesion involved the entire left ear and half of the left cheek. The larger part of the disease on the cheek had been cured by the Roentgen ray; the patient was still under treatment.

DR. WISE in reply to criticisms did not think a year and a half was too much time to take to effect a cure in a case like the one under discussion. He said that persons connected with the Finsen Institute of Copenhagen, had told him that no cure could reasonably be expected under such conditions in less than five years.



**Tinea Tonsurans Treated by the Single Dose X-Ray Method. Presented by DR. MACKEE.**

The patient was a boy, ten years of age, who had come to Dr. Fordyce's clinic for the treatment of ringworm of the scalp—a patch about the size of a silver dollar. On February 6th, 1911, he had been given one application of the X-ray and in three weeks there was the faintest sign of an erythema which was followed by an alopecia of the area treated.

DR. GEYSER said that he had applied the X-ray to a great many scalps, both for the cure of ringworm and for eczema, and the hair returned in all but two cases. In one case, where the hair had previously been perfectly straight, after the X-ray alopecia it was curly. The speaker thought that with the best of technique there was a possibility of causing permanent alopecia.

DR. MACKEE said that he had never been so unfortunate as to have a case in which the hair had entirely failed to return. He had had, however, two patients in whom the regrowth of hair had been incomplete, and several cases in which the new hair was of different color and quality. He agreed with Dr. Geyser that even with the most perfect technique, there was danger of producing more or less permanent alopecia. This was largely due to the convex shape of the head and to the difficulty of keeping the head in a fixed position during the exposure. In response to inquiries, the speaker said that the regrowth of hair usually began in from one to three months. Occasionally there was a very much longer delay.

**Parakeratosis Scutularis. Presented by DR. WEISS.**

This patient had been previously exhibited at the Dermatological Section of the Academy of Medicine under the title of psoriasis rupioides (*Jour. Cutan. Dis.*, June, 1910, p. 296; February, 1911, p. 101). Dr. Pollitzer at that time, suggested the diagnosis of parakeratosis scutularis and mentioned a similar case contained in the International Atlas of Rare Skin Diseases. Dr. Weiss had read the literature of the subject and had studied the case very carefully and he was now convinced that it was one of parakeratosis scutularis. The speaker said that the details and photographs of the case would be published in *THE JOURNAL* at a later period.

**Erythema Induratum. Presented by DR. GOTTHEIL.**

A. B.; female; married; thirty-five years of age. Some months ago a small nodule appeared on the anterior surface of her right leg, which slowly increased in size and became red. A little later, another similar one appeared lower down on the same limb. The first lesion grew to the size of a pigeon's egg, and seemed about to ulcerate, but instead of doing so it slowly involuted. When presented to the Society, the original lesion was a non-elevated, purplish, fairly hard mass, the size of a large marble. The later lesion was larger, redder, more elevated, and softer. Subjective symptoms were absent. The patient was in good health and showed

no signs of past syphilis. She had had one child who was now eleven years old, and had since had two miscarriages. The very slow and perfectly painless development of the lesions on the woman's leg, their spontaneous retrogression, etc., led the speaker to reject the diagnosis of gumma originally made, in favor of that of erythema induratum.

**Sarcoma, Showing the Result of a Thermic Burn.** Presented by DR. GEYSER.

The patient was a female, fifty years of age. The lesion involved the right eyelid and a portion of the nose. Considerable improvement had resulted from applications of the X-ray. In employing the Cornell tube by direct contact in this case the bulb was allowed to become overheated, with the result that a thermic burn was produced. The speaker presented the case to demonstrate the difference between an inflammation of this character and a radiodermatitis.

**Dermatitis Herpetiformis.** Presented by DR. DITTRICH.

The patient was a male, forty-eight years of age, married and a laborer by occupation. Thirty-five years ago he had had an eruption that was considered a papular eczema. Since that time he had never been entirely free from the disease, although occasional relief was obtained from the intense pruritus. On one occasion the condition had been mistaken for syphilis and a long course of anti-luetic treatment was administered without effect. Later, a biopsy was made, establishing the diagnosis of dermatitis herpetiformis. When presented to the Society, there were groups of vesicles scattered over the chest and back and lumbar region. There was some pigmentation, scratch-marks, blood-crusts and excoriations.

REVIEW  
OF  
DERMATOLOGY AND SYPHILIS.

Under the charge of GEORGE M. MacKEE, M.D.

HEREDITARY SYPHILIS AND SYPHILIS OF THE NERVOUS  
SYSTEM.

By ERNEST L. McEWEN, M.D., Chicago.

On the Differential Diagnosis Between Syphilogenetic and Non-Syphilogenetic Diseases of the Central Nervous System in Syphilitics. M. NONNE. *Neurol. Centralbl.*, 1910, xxix, p. 1178.

Discussing an assertion by Toby Cohn (*Neurologische Centralblatt*, 1910, No. 13) that in doubtful cases of nerve disease the non-syphilitic nature of the trouble may be mistaken for syphilitic if the Wassermann reaction in the blood is positive, the author claims, and cites cases to prove, that this error may be avoided by a quantitative testing of the complement-binding power of the spinal fluid.

Hauptmann working in Nonne's wards, found that by using larger quantities (*i.e.* up to 1 cm.) of liquor spinalis a positive reaction could be obtained in cases of tabes, and cerebral, spinal, and cerebro-spinal lues, where the use of smaller quantities (.2 cm) gave negative results. The three cases cited were all syphilitic, with evidences of profound disturbance of the central nervous system; the Wassermann reaction in the blood was strongly positive in each. In two, the Wassermann applied to the liquor spinalis was negative, 1.0 and 0.8 cm. being the amounts used; post-mortem section showed in each a non-syphilitic lesion of the nervous system, *i.e.*, a glioma of the cord. The third case gave a positive reaction with .6 cm. of spinal fluid, while .2 cm. gave a negative result; section showed a meningocephalitis gummosa.

Nonne therefore believes the quantitative estimation of the reaction in the spinal fluid to be of great differential value. Hauptmann found that liquor spinalis shows no self-inhibition when used in quantities as high as 1.6 cm.

A Review of Serum Reaction in Cases of Nervous and Mental Diseases.  
E. P. CORSON-WHITE, and S. D. LUDLUM. *Jour. Nerv. and Ment. Dis.*, 1910, xxxvii, p. 721.

The article is of great interest to students of syphilis and should be read in the original.

It is based upon the examination of 1,710 cases of nervous and mental disorders by sero-diagnostic tests, including, among others, the Was-

sermann complement-fixation test, the Noguchi butyric acid test for increase of globulins, and Weil's cobra-venom test for alteration in the character of the red cells.

Noguchi's test for increase of globulins is of great corroborative value in syphilis, but is not specific. Globulin increase appears before the Wassermann and lasts longer. It constantly attends primary, secondary, and tertiary syphilis; it is strongly positive in paresis, and is more constantly present in cerebro-spinal lues and tabes than the Wassermann test. Absence of the butyric acid test is greater proof of absence of syphilis than a negative complement-fixation test. Persistence of globulin increase is an indication for treatment after the Wassermann has ceased to be positive.

Weil's cobra-venom test is also corroborative of syphilis. Under the influence of syphilitic toxin the red cells show at first an increased fragility toward hæmolytins (cobra-venom, mercury bichloride) followed later by a marked resistance.

In primary syphilis, 60 per cent. gave a positive Wassermann on first examination; 98.5 per cent. on fourth examination. Nearly all negative cases become positive later, though rarely the reaction is not obtained in cases unquestionably syphilitic. In the primary stage the presence of the spirochæta is the earliest positive sign; next, a gradual increase in the globulins of the blood occurs, with an increased fragility of the red cells to cobra-venom. The Justus test is present at this time. The Wassermann test becomes positive four or five weeks after the appearance of the chancre, and is an indication that the infection has become generalized.

In the secondary stage, globulin increase and complement-fixation are present in 98 to 100 per cent. of cases. Negative results are usually due to treatment. Unless positive signs of syphilis are present, repeated negative results should speak strongly against syphilis. The red cells acquire a marked resistance to cobra-venom and other hæmolytins.

Following the secondary stage, a period of latency occurs. During this period the spirochæta are so reduced in quantity or virulence as to be no longer able to produce a lesion or to stimulate the formation of antibodies. If the resistance of the individual is reduced from any cause the equilibrium between host and organism is lost and the disease becomes manifest again in a simple recurrence of a Wassermann, or in some form of tertiary lesion. In these cases, in the presence of a definite syphilitic history and a negative Wassermann, globulin increase should never be disregarded; the Wassermann may soon become positive, or a syphilide may appear. Continuation of treatment is indicated.

A latent syphilitic can give birth to a syphilitic child. The question of marriage demands a careful study of serum reactions. Inasmuch as the Wassermann reaction disappears under treatment, and may be found

over thirty-five years after the initial lesion, it is well to abide by the old rules regarding the marriage of syphilitics. The Wassermann test has been only a few years in use, and it is difficult to say, with our present knowledge, that a negative reaction, even though continued, means a cure.

Congenital syphilis gives a positive Wassermann in practically all cases, and the test is less easily influenced by treatment. A moderate percentage of cases of convulsions, tremors, hydrocephalus, monospasms, paralysis, pseudo-paralysis, neuralgia, infantilism, imbecility, idioey and arrested development gave positive reactions. Mental enfeeblement, after a certain mental development is attained, is often specific. Cerebral syphilis in children may be present without stigmata. In 9 cases of dystrophy, classified by Fournier as due to hereditary lues, 7 gave negative results. In 49 cases of epilepsy, 1 gave a positive result. In 49 cases of mentally defective or backward children, 36 per cent. gave positive results; the majority of these were not obviously syphilitic.

In tertiary syphilis positive results are fewer than in the secondary stage, but more frequent than in the latent period. Tuberculosis and syphilis may coexist, and in cases of bone disease it is often well to apply both the Wassermann and the von Pirquet tests. Syphilis may prepare the soil for tuberculosis or tuberculous may reawaken a syphilis by stirring up latent foci.

In tertiary syphilis of the nervous system the cobra-venom test was of little value; the Wassermann appeared in 67 per cent. of cases and the globulin increase became an almost constant sign, *i. e.*, in 94 per cent. of cases. Failure of the Wassermann in these cases is a great handicap as it is often necessary to differentiate other conditions. In para-syphilitic conditions, globulin increase is the most constant finding. Parallel examinations of the blood and spinal fluid are to be commended as a means of differentiating between tabes and tabo-paralysists. In tabes the complement-fixation test was present in the blood in 62 per cent.; in the spinal fluid in 40 per cent.; globulin increase in 98 per cent. In general paralysis the test was alike in both blood and spinal fluid, *i. e.*, in 98-100 per cent., and globulin increase was the same.

In conclusion, the author thinks the Wassermann test is of immense value in determining the syphilitic genesis of nervous conditions; its value is greatly enhanced by the parallel use of the globulin tests and cobra-venom test.



## BOOK REVIEWS.

**The Principles and Practice of Dermatology;** designed for students and practitioners. By WILLIAM ALLEN PUSEY, A. M., M. D., Professor of Dermatology, University of Illinois, etc. Second edition. *D. Appleton & Co.*, 1911.

The second edition of Dr. Pusey's book is a very successful attempt to present a reflex of current dermatological knowledge. While it contains much that is necessarily found in every text-book of dermatology, it is far from being a mere compilation. The individual opinion of the author is freely expressed and adds greatly to the value of the book.

Many new topics are discussed such as sporotrichosis, brown-tail moth dermatitis, pellagra and the therapeutic uses of radium, liquid air and solid carbon dioxide; and some other important subjects, such as the ætiological rôle of the spirochæta pallida, the application of the complement fixation test to the diagnosis of syphilis and the use of salvarsan, subjects which were practically unknown when the first edition was published four years ago.

One of the notable features of modern text-books, especially those on dermatology, is the increasing number of illustrations. Dr. Pusey's work contains three hundred and fifty-six, in addition to several plates, making it the most profusely illustrated work on this subject. The illustrations are drawn from various sources and contain a few which have been already published. Most of them, however, are from photographs contributed by fellow dermatologists and are, for the most part, excellent. A few are very poor specimens of clinical photography and fail to show the lesions as clearly as is both possible and desirable.

G. H. F.

**Lectures on Cosmetic Treatment. A Manual for Practitioners** by Dr. EDMUND SAALFELD. Translated from the German by J. F. HALLS DAILY. With an introduction and notes by P. S. ABRAHAM, *Paul B. Hoeber*, 1910, New York.

This is a little book of one hundred and eighty-six pages, and comprises a series of lectures given by the author on cosmetic treatment, and published in 1892 in the *Therapeutische Monatshefte*. As Dr. Abraham truly says in his introduction, the average medical student leaving the hospital knows very little about the treatment of skin diseases in general, and much less about the treatment of the common facial blemishes which he will encounter in his practice. A perusal of this work will give the practitioner sufficient information to enable him to handle intelligently the various dermatoses and blemishes which he will be called upon to treat. Although most of the subject matter in these lectures can be found in any complete work on dermatology, the value of the work lies in the fact that the subject is more or less limited to cosmetic treatment, presented in compact form, and enabling the practitioner to look up the desired subject without losing much time in searching through a complete treatise on skin diseases.

The lectures include descriptions of the treatment of seborrhœa, acne and comedones, dry eczema of the face and other disturbances of the complexion; anomalies of cornification, new vessel formations, hypertrichosis, anomalies of pigmentation and of sweat-secretion. The lectures on premature loss of hair and the care of the scalp are especially well worth reading. The paragraphs on hair dyes, paints and powders are usually not to be found in the average work on dermatology.

F. W.

# THE JOURNAL OF CUTANEOUS DISEASES

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## ORIENTAL SORE.\*

By S. T. DARLING, M.D.

Ancon Hospital, Canal Zone.

**O**RIENTAL sore (dermal leishmaniasis) is an infective granuloma of the skin, usually ulcerative in character, appearing most often on an exposed part of the body and occurring endemically in certain tropical and sub-tropical localities. It is caused by an intracellular protozoön, *Leishmania tropica*, and appears to be transmitted by dipterous insects, either in the act of biting or by mechanically infecting the broken skin.

The discovery of this disease in several places in the New World—Brazil and Guiana, and by the writer in the Canal Zone, naturally suggests the likelihood of its being encountered in Central America, Mexico and some of the Southern States. This paper is presented before the Society for the purpose of calling attention to the disease on that account.

### HISTORICAL SKETCH.

Although a diagnostic criterion for this affection was not established until 1903 by Wright, the disease has been well known and has been described by travelers from the East for many years. The first serious account of the disease was that of Russell.<sup>1</sup> Other accounts were published by travelers and temporary residents of Aleppo, such as those of Dr. Holland, Alibert, Disant, Guilhou and Willemmin.<sup>2</sup> The last made a study of the disease during a sojourn in Aleppo in 1852. From his description we learn that the disease was known in certain towns and villages in the valleys of the Tigris and Euphrates

\*Read before the American Society of Tropical Medicine, New Orleans, May, 1911.

<sup>1</sup>RUSSELL, ALEX. The Natural History of Aleppo and Parts Adjacent, London, 1756.

<sup>2</sup>WILLEMMIN, A. Mémoire sur le bouton d'Alep. *Gaz. méd. de Paris*, avril, 1854.

—Aintab, Diarbekir ( $38^{\circ}$  N.), Urfa ( $37^{\circ}$  N.), Mosul ( $36.5^{\circ}$  N.) and Bagdad ( $33.5^{\circ}$  N.) in Kurdistan and Mesopotamia. According to Lachéze, the "bouton" was known in Teheran ( $35.5^{\circ}$  N.) and Tabriz ( $38^{\circ}$  N.) in Persia. On the Island of Crete and at Cairo. In Russell's description, three species of sores are mentioned: "male," "female" and a third variety attributed to the bite of a "thousand leg," the Arab name for the affection being known as "Khars el Umm-Aly" (bite of the mother of Aly), the term Aly referring to *Oniscus murarius*. The numerous contributions to the subject during the last half century can be found in Hirsch,<sup>1</sup> Scheube,<sup>2</sup> and Marzinowsky.<sup>3</sup>

#### GEOGRAPHICAL DISTRIBUTION.

OLD WORLD. At the present time we know that the affection is widely, though not diffusely distributed, in many tropical and sub-tropical countries. Its presence as confirmed by microscopic diagnosis, has been noted in the following places: Europe, Greece (Cardamatis<sup>4</sup>): the Crimea: (Scheube). Transcaucasia, in Lenkoran and Elizabethtopol, where it is called "Godowik" and "Il-jarassy" (Marzinowsky). Turkey, in Asia: Syria: Aleppo, where it is known as "Aleppo boil;" "Haleh Choban." Crete: Armenia; Mesopotamia. Asia: Persia, where it is known as "flybite," "annual," "yearly boil." Turkestan, "Pendjeh ulcer." India: The Punjab, Rajputana States and the Northwest Provinces, where it is known as "Delhi Sore." Africa: Egypt, Tunis, in the Sahara of Tunis, where it is known as Gafsa boil ("clou de Gafsa"). Algeria: In the Algerian Sahara, where it is known as the "Sahara chancre"; "Biskra button," "Bouton de Ziban" ("hhabb-el-seneh"), (button of a year, Arabic), "Dous el kourmati" and "Bess el temeur" ("the date disease").

NEW WORLD. The geographical distribution of Oriental sore in the New World is at present apparently limited to certain localities where laboratories for medical research have been established and where special efforts have been made to discover the disease. When research becomes more widely diffused, the disease, no doubt, will disclose a wider distribution.

<sup>1</sup>HIRSCH. *Handb. der hist. geogr. Path.* 1886, iii, 467.

<sup>2</sup>SCHUEBE. *The Diseases of Warm Countries*, P. Blakiston's Son & Co. Philadelphia, 1904.

<sup>3</sup>MARZINOWSKY. *Zeitschr. f. Hyg. u. Infektionskrankh.*, lviii, 327.

<sup>4</sup>CARDAMATIS, J. P. *Bull. Soc. path. exot.*, Paris, May 12, 1909.

Wright's case of Oriental sore, from which the pathogenic agent was first described, was not an autochthonous one, the patient being an Armenian girl, nine years of age, and having acquired the infection two or three months before she had left Armenia. The first note of its appearance in America is by Moreira<sup>1</sup>, who, in 1896, reported its occurrence in Bahia, Brazil. The diagnosis, however, was made by clinical and not by microscopic examination, for the pathogenic agent was not known at that time. Lindenberg, Carini and Paranhos<sup>2</sup> reported, in 1909, a few cases seen at Baurú, São Paulo, Brazil, among Syrian and Brazilian laborers. A single case has been reported from Guiana.<sup>3</sup>

In August, 1910, I discovered a case of Oriental sore in a negro who had been living in the bush on a rubber plantation outside of Las Cascadas, C. Z. This discovery of an autochthonous case in the Canal Zone led to a careful search for others, and from among the suspicious cases sent to me recently for diagnosis, I have found three others. With the above, these are the only reported cases of Oriental sore in the New World confirmed by microscopic examination.

#### CLIMATOLOGICAL FACTORS.

According to Hirsch, Boudin, Laveran, and others, there is a definite seasonal variation to the incidence of infection. At Biskra and in the Caucasus, the boil appears most often in the autumn, September to October. At Biskra, a French garrison of 762 men had 105 men infected, and of these, 30 were infected in November, 59 in December, and 15 in February. In some places, as Aleppo and Bagdad, the disease is seen throughout the year, but the autumnal rainy months are those of its maximum prevalence. It will probably be found that this is related to the prevalence of insect carriers of the disease, flies or mosquitoes, for instance.

It has been noted by writers on the subject that while the disease is rife in certain towns, it may be quite unknown in other places several miles off—that certain places are endemic foci of the disease and remain so—differing in this respect from kala azar, which is caused by a protozoön, resembling very closely that of Oriental sore, which seems to spread over a country like a ringworm, but

<sup>1</sup>MOREIRA, JULIANO. *Monatsh. f. prakt. Dermat.*, 1896, xxii, 592.

<sup>2</sup>LINDENBERG, CARINI and PARANHOS, *Revista Medica de São Paulo, Brazil*, March 31, 1909.

<sup>3</sup>NATTAN-LARRIER, TOUIN and HECKENROTH. *Bull. Soc. path. exot.*, 1909.

leaving a place comparatively clean after it has passed on. From this peculiar localizing feature of the infection, and on account of our ignorance of other determining factors in the infection, it would be hazardous to say that the disease should certainly be encountered in the Southern States and Mexico, but from a comparative examination of the average temperatures and of the latitude of certain infected places in the Old World with those of some of the cities of the Southern States and Mexico, we have a strong indication from analogy and from the fact that it exists in some places in the New World, that it will be found in the Southern States when especially looked for.

Location	Latitude	AVERAGE TEMPERATURES (Centigrade).				
		For year	For 3 Winter months.	For 3 Spring months.	For 3 Summer months.	For 3 Autumn months.
Aleppo .....	36.11°N	17.6	6.3	13.4	27.2	18.9
Algiers .....	36.47°N	17.8	12.4	15.5	23.6	19.9
Tunis .....	36.48°N	20.3	13.2	18.3	28.3	21.9
Saharanpore .....	29.57°N	22.4	12.2	24.8	30.0	22.2
New Orleans .....	29.58°N	21.1	15.1	21.7	28.2	21.4
Savannah .....	32.5 °N	19.3	11.5	19.6	27.0	19.4
Mexico .....	19.26°N	16.6	13.0	18.1	19.1	16.2
Nashville .....	36.10°N	15.0	4.5	15.8	25.2	14.6

Latitudes of the following places where cases of Oriental sores have been detected: Gafsa, 34.5°N., Biskra, 34.5°N., Bagdad, 33.5°N., Elizabethspol, 42.0°N., Crimea, 45°N., Greece, 34.40°N., Delhi, 28.5°N., São Paulo, 23.5°S., Panama, 9°N.

It would seem, then, that we might expect to find Oriental sore in America, between, say latitudes 40° S. and 40° N. in localities having an average annual temperature of 17.6°, or more, and in which the average winter temperature is not lower than 6.3°.

#### PATHOGENIC AGENT.

In the light of our present knowledge, we may dismiss the accounts of pathogenic agents which refer to various parasitic ova, etc., as being of no value—distoma ova (Smith, 1868); parasitic ova (Fleming, 1873) mycelium of a fungus (Carter, 1875); cocci, and other microorganisms.

Cunningham,<sup>1</sup> in 1885, described parasitic microorganisms in a section of tissue from one specimen of a Delhi boil, but his description conforms more closely to those of blastomyces or cell degenerations than to the pathogenic agent, *Leishmania tropica*. The following year Riehl<sup>2</sup> published his findings in a case of "Orient beule."

<sup>1</sup> CUNNINGHAM, *Sci. Mem. Med. Offic. Army of India*, 1885, i, 21.

<sup>2</sup> RIEHL, *Vierteljahrsschr. f. Dermat. u. Syph.*, 1886, 805.



Riehl's bodies were described as encapsulated micrococci in large epithelioid cells.

Subsequent to this, micrococci were cultivated from ulcers of this class by a number of workers; but as the protozoal bodies, *Leishmania tropica* are in ulcers frequently associated with micrococci, the presence of the latter must be regarded as that of commensals.

Borowski,<sup>1</sup> in 1898, described bodies obtained from twenty cases of the "Sarten boil." These answer well to the description of *Leishmania tropica*, as do those of Bogorás,<sup>2</sup> who studied his organism in sections of tissue from the lesion called "Godowik." Schulgin<sup>3</sup> confirmed the findings of Bogorás and suggested that the disease might be transmitted by mosquitoes. As well as one can make out from the descriptions in the literature, Borowski was the first to describe from skin ulcers the bodies now known as *Leishmania tropica*. It was Wright,<sup>4</sup> however, who, from a careful study of the morphology of the parasite in smears and sections of an Armenian boil stained by a modification of Leishman's modification of the Rowmonowsky stain and by his beautiful photomicrographs, placed the matter in a clear light. Subsequent research by Marzinowsky, Bogrow, Plehn and James have established the fact that *Leishmania tropica* is the pathogenic agent of Oriental sore. More recently, very important work has been done by Row, Carter and particularly by Nicolle, at Tunis, on the cultural and immunological characters of the parasite.

In smears from the ulcers, or in films taken from serum expressed from the nodules, small, oval, round or oat-shaped bodies are found in the cytoplasm of large mononuclear cells. They have a large purple staining mass placed at the periphery and a smaller, more deeply staining rod, or dot, the kintonucleus, always placed a short distance from the trophonucleus and at different angles with respect to it and the long axis of the parasite. The cytoplasm stains faintly blue as in the malarial parasite and there are small acromatic spaces or lines in some of the specimens seen here, exactly like those in the Gregarine phase of *crithidia*. The microorganisms vary somewhat in size in different ulcers but are usually five or six microns in length, 3 to 3½ microns in breadth, the length of the kintonucleus about 1.5 microns and the diameter of the trophonu-

<sup>1</sup> BOROWSKI. *Milit. Med. Jour.*, 1898, 925.

<sup>2</sup> BOGORÁS. *Arbeits. d. II Kongr. d. kaukas. Ärzte.*

<sup>3</sup> SCHULGIN. *Russk. Wrach.*, 1902, No. 32 u. 33 s. 1150 u. 1180.

<sup>4</sup> WRIGHT, J. H., *Journ. Med. Res.* 1903, x 472.

cleus about 2 to 2.75 microns. These bodies described by Wright under the name *Helcosoma tropicum* have been cultivated by Row, Carter and Nicolle; on special media they become flagellated and resemble very closely the gut flagellates of insects—*Crithidia* and *Herpetomonas*. Those studied by Nicolle are certainly *Herpetomonas*. These flagellates, as is well known, are closely related to trypanosomes; *Crithidia*, such as are found in biting flies, and fleas, resembling trypanosomes more closely than *Herpetomonas*. I feel very certain that these parasitic intracellular bodies in man—*Leishmania tropica* and *Leishmania Donovanii*, have an extra-corporeal existence in the intestinal tract or biting parts of some representatives of the *Diptera*. The pathogenic agent of Oriental sore is morphologically indistinguishable from the bodies found by Leishman and Donovan in the spleen of patients dying of kala azar, a fatal cachexial disease of Asia, and by Nicolle, in infantile kala azar of the Mediterranean.

As the bodies found in kala azar have been named by Ross, *Leishmania Donovanii*, it has become necessary to call the bodies discovered by Wright *Leishmania tropica*. Some confusion in nomenclature has arisen from the fact that Cunningham, in 1885, described certain bodies in the cells of tissue from a case of Delhi sore, and in confirming his results later, Firth proposed the term *Sporozoa furunculosa*, the specific term of which Blanchard believes should be retained for the parasite of Oriental sore. The question hinges on the identification of Cunningham's bodies with those of Wright. In my opinion it does not seem possible that the bodies described by Cunningham were the ones we now recognize as *Leishmania tropica*.

While the parasites of kala azar and Oriental sore resemble one another very closely, there are certain biological differences; for instance infections by *Leishmania tropica* are confined to the skin, particularly those portions exposed to sunlight, while in infections by *Leishmania Donovanii*, the deeper internal viscera are invaded, suggesting that *Leishmania tropica* requires sunlight and *Leishmania Donovanii* the darkness, and further that *Leishmania tropica*, in its insect host, enjoys the more or less well-lighted translucent medium of a mosquito or fly exposed to daylight, in contrast with *Leishmania Donovanii*, which, from Captain Patton and Rogers' researches, is known to demand the relatively darker medium of the nocturnal daylight-shunning bedbug. Another essential difference between the two microorganisms, as pointed out by Minchin<sup>1</sup> is its

<sup>1</sup> MINCHIN. Letter to British Medical Journal, Aug. 3, 1909.

behavior with sodium citrate, *Leishmania tropica* failing to develop in this medium, while as Rogers discovered, *Leishmania Donovan*i develops a flagellum. Minchin believes that this fact indicates a difference, too, in the mode of transmission of the two parasites.

#### SUSCEPTIBILITY.

From the time of Russell's account, all writers have noted that the sore attacks all persons without exception, and at Aleppo, most often during the first three years of life. It is rare for an Aleppin to reach the seventh year without being infected.

#### IMMUNITY.

It is generally recognized that one attack of Oriental sore usually confers immunity against a subsequent one. The Jews of Bagdad were in the habit of inoculating their children on the body with virus from a sore so that they might not later suffer a disfiguring scar on the face.

#### MODE OF INFECTION.

Russell and Volney attributed the infection to some toxic agent in water, but this theory has now been entirely abandoned. In connection with their theory it should be mentioned that from Patton's researches and those of others, we have become aware of the presence of flagellates in a large number of insects. Patton, for instance, finding them in the water bug *Gerris fossarum*—(*Crithidia gerradis*). Now it may be possible under certain circumstances for various water bugs to cause the infection.

I have pointed out in another place<sup>1</sup> that the location of the lesion often corresponds with the location of the bites of *Stegomyia calopus*. Our cases here, however, have never developed in towns where the *Stegomyia* thrives, but out in the bush where *Tabanids* and other sylvan varieties of flies or mosquitoes prefer to live. It is very likely in certain endemic centres in the East—cities and towns—that *Stegomyia*, or other essentially town-breeding mosquitoes will be found to be the carriers, while in other places, where the disease is most often encountered in the bush, that horse flies and sylvan species of flies or mosquitoes will be incriminated. Until we have more definite knowledge, all invertebrates harboring *Crithidia* or *Herpetomonas* must be held under suspicion. It has long been

<sup>1</sup> DARLING. Oriental Sore in Panama. *Arch. Int. Med.*, 1911, vii, p. 581-597.

noticed that the disease became more pronounced as the date season came in, and it was concluded from this that the disease was due to eating unripe dates, but we can see that the date season merely corresponds with the mosquito or fly season, just as here in the Canal Zone the mangoes begin to ripen in numbers with the onset of the rains. Similarly, there is a common belief among some of the natives here that if foreigners eat the mangoes, they will get the "fièvre" (yellow fever). This is merely an expression of the fact that the mosquitoes multiply in numbers after the rains.

In the dissection of suspected insects for flagellates, the salivary glands and sucking parts should be scrutinized as well as the intestinal tract, for the former may be the only means of infecting. On the other hand, of course, it is possible for open cuts to be infected by means of the post-flagellate phase of the flagellate in the fœces of the insect.

#### INOCULATION EXPERIMENTS.

During the occupation of Egypt by the French, some early attempts at inoculation were made, and it is said that "buttons" of short duration were produced. Willemin inoculated a number of children and some adults, and in a few instances succeeded in producing a sore. Willemin also mentions the fact that he saw two dogs with "buttons" on the extremities of their muzzles. It should be mentioned that Nicolle has recently succeeded in infecting dogs on the muzzle with the Biskra button.

Nicolle's<sup>1</sup> researches on Oriental sore carried out at Tunis are most complete. He and Manceaux have identified the "Clou de Gafsa" with other varieties of Oriental sore, and they found that the pathogenic agent, *Leishmania tropica*, had the same morphological characters and the lesions were identical. Cultures of *Leishmania tropica* were obtained easily, using blood agar. The cultures developed and lived for several weeks at a temperature of 22°C. When cultures from man were inoculated into either man or monkeys, typical "boutons" were produced, even with the fourth generation of cultures, the period of incubation being 16 to 166 days. Constant and positive cultural results with the experimental virus could only be obtained with material from the very young "boutons." The virus of Oriental sore is inactive for the goat, cat, sheep, wild rat, horse and ass. Curiously, the region of election for successful in-

<sup>1</sup> NICOLLE et MANCEAUX. Recherches sur le bouton d'Orient cultures, reproduction expérimentale, immunization. *Ann. de l'Institut Pasteur*, xxiv, 673.

oculation in the monkey and dog is the nose. Subcutaneous inoculation on the body was negative. The inoculation of 100 cultures of *Leishmania tropica* into the peritoneal cavity of a dog did not confer any immunity upon subsequent inoculation into the skin. They state that there is reason to suspect the dog as being a natural reservoir for the virus of Oriental sore and that this animal plays a capital rôle in the ætiology of Leishmaniosis. Possibly the raccoon is equally susceptible, for I have found that the dog and the raccoon react in an almost identical manner with a trypanosome (*Trypanosoma hippicum*).

#### THE SORE: APPEARANCE, LOCATIONS, TYPES.

The sore appears first as one or more papules, usually on some exposed part of the body, as the ear, face, forearms or legs. The other parts of the body are much less susceptible to primary infection, but they are susceptible to autoinoculation. Several types of lesions are seen: The non-ulcerative or nodular type is one. This may be single or multiple. There are also abortive nodules which develop no further than the papular stage and then disappear without ulceration. A common type is a solitary ulcer. Multiple ulcers and a spreading ulcerative form, common in autoinoculations, are seen. The sore may develop from what is apparently an insect bite, a very definite fly bite, or by the infection of any break in the skin. Nicolle determined, experimentally, that the period of incubation was 16 to 166 days. In the typical ulcer there are four stages: (1) infiltration, proliferation and induration; (2) desquamation; (3) ulceration or involution; (4) cicatrization. The chief character of the ulcerative process is an erosive one and its tendency to become a little larger as each scab is renewed until the maximum size is attained. The papule may form the first discharge turbid serum, which coagulates into a tough scab. There is considerable itching during the papular stage and some writers mention that fever and malaise are present in some cases. The ulcer may reach the size of 6 or 8 cm. in diameter and after existing for from several months to a year, or a year and a half, the scab becomes progressively smaller and cicatrization occurs, leaving a permanent scar.

#### DIAGNOSIS.

Considering the protean character of the lesion, a positive diagnosis can only be made by finding the pathogenic agents in smears or sections of tissue. They are seen in greater abundance in the



younger lesions, but may be found in all, if sufficient pains are taken in the search for them. When sparse I have found them in somewhat larger numbers at the periphery of the ulcer than toward the centre.

Film preparations of the microorganism from different cases contain bodies differing slightly from one another, though approaching the type very closely. Sometimes the bodies are all quite globular; in others, more attenuated or oat-shaped. Their size varies, too, indicating that different species of flagellates may be concerned in the infection. In the older ulcers, when the bodies are sparse, it is not uncommon to find a few extracellular, degenerated oval or oat-shaped bodies devoid of chromatin. When these are encountered, a careful search will usually reveal typical bodies.

The lesions at different stages and of different types have to be differentiated from the following conditions, but this can be done with certainty only by finding the pathogenic agent: Furunculosis, rodent ulcer, lupus, keloid, infected mosquito and tick bites and ulcers, ecthyma, impetigo, extra-genital chancre, dermatomycoses, tropical ulcer and yaws. On account of this resemblance to other infections, James<sup>1</sup> remarks will bear repeating. "The appearance of some true Oriental or Delhi sores is by no means so characteristic as one would expect it to be from the descriptions in books and I found that the Civil Surgeons, whose experience with the disease was considerable, were often unwilling to express a definite opinion as to whether a given sore was really an Oriental sore, or whether it was an example of the ordinary chronic ulcer so common among natives of India. When I say that the first example of an Oriental sore seen by me in Delhi appeared at a superficial examination to be more like a ringworm than anything else, and that I at first considered another Oriental sore to be an ordinary "shoe bite" it will be apparent that I have felt a similar difficulty in diagnosis."

In these words James expresses the difficulty of diagnosis and shows that Oriental sore does not always present very distinctive characters, and here is to be found the explanation of the failure of a number of competent observers to find *Leishmania tropica* in certain types of tropical ulcers.

#### HISTOPATHOLOGY.

The accounts of the histology of the sore vary somewhat, but may be explained on the ground that such descriptions have been

<sup>1</sup>JAMES. Oriental or Delhi Sore. *Sci. Mem. Off. Med. San. Depart. Govt. of India*, N., series 13, 1905.

based on sores of different ages and those evoked by microörganisms, possibly of different species and of different degrees of virulence. Early, there is atrophy of epithelium and disappearance of the papillæ, with a proliferation of round and endothelial cells, the latter containing the pathogenic agent. Later, there is metaplasia of the epithelium and sometimes a few giant cells are seen. There are many epithelioid cells and fewer parasitized endothelial cells. The sweat glands and the perivascular lymph spaces show considerable invasion by round cells. Coincident with ulceration, there is a secondary invasion by skin cocci and a slight leucocytic exudation.

#### TREATMENT AND PROPHYLAXIS.

Until the exact mode of infection has been ascertained it will be impossible to adequately protect against the infection.

The ulcers should be kept surgically clean and protected from flies, etc., by dressings. The addition of some member of the coal-tar group, distasteful to flies, such as "creolin" or "kreso" is recommended.

All writers on the subject are agreed that external applications are not always effective in removing the sore. Early, free excision should be practiced whenever possible. Marzinowski has successfully treated a number of cases by freezing the "button" with ether. Castellani advocates the use of protargol. Among other substances used are tincture of iodine, 10 per cent.; methylene blue, 10 per cent.; powdered permanganate of potash; ferropyrin; bromide of quinine, etc. Duncan advises the application of a thin piece of lead over the ulcer, the rationale of which is rather obscure, unless it be that the lead prevents the access of sunlight. In view of the suspicion that *Leishmania tropica* requires sunlit subcutaneous tissue to develop in, this method of Duncan's deserves further trial.

## A METHOD OF DEMONSTRATING SPIROCHÆTÆ AND TRYPANOSOMES BY MEANS OF NIGROSIN.\*

By CHARLES GOOSMANN, M.D., Cincinnati.

From the Laboratory of the Cincinnati Hospital.

BURRI'S India ink method, first applied to the diagnosis of syphilis by Hecht and Wilenko,<sup>1</sup> has received considerable favor on account of its simplicity. There is, however, some evidence of dissatisfaction because of the granularity of smears made according to this method. Barach<sup>2</sup> speaks of deceptive, wavy fibres resembling spirochætæ forms found by him in India ink. Gins<sup>3</sup> insists on thorough sedimentation of the ink, and also advises the use of a specially prepared glass slide to facilitate making thin smears. To overcome the undesirable granularity I have been using a solution of nigrosin (nigrosin No. 699 of the National Aniline and Chemical Co., Chicago), which gives a much smoother background than India ink. This is a blue-black pigment, but their black nigrosin No. 15502 can also be used. Figure 12 is from a slide made with the latter. Gruebler's water-soluble nigrosin has been tried, but precipitates too easily, probably on account of its greater purity, as it is well known that impure colloids frequently remain in solution better than the purified. The nigrosin recommended above can be obtained through any wholesale druggist.

With coarse spirochætæ (Fig. 1.), granularity of the background is immaterial. With more minute forms (Figs. 2, 3, 4, 5), it is a distinct disadvantage, as the film cannot be thinner than the average diameter of the granules, and if the film is thicker than the organisms, it will blur the latter's outlines. In the demonstration of bacterial flagella, therefore, the India ink method has been unsatisfactory, as Gins<sup>4</sup>, who has done considerable work on flagella, admits. Figure 14 shows a nigrosin preparation of a monotrichous vibrio (*Spirillum sputigenum*?) from a normal mouth. The same type, mounted in India ink, showed no sign of flagella.

Figure 15 is a nigrosin preparation of a flagellate obtained by Dr. O. V. Hoffmann from the fæces of a guinea pig. Attempts to show flagella on *Bacillus typhosus*, however, have not been successful, probably because the nigrosin particles, though much smaller than India ink, are still too large. Nigrosin is a suspension colloid, and by dark-ground illumination the minute particles of which it is com-

\*Read before the Cincinnati Research Society, Feb. 6, 1911.

posed can be distinctly seen. It may be that a pigment that actually enters into true solution will be capable of rendering these minute flagella visible. To illustrate my meaning: Burri describes the appearance of India ink preparations as resembling that produced by dropping pieces of glass rods into melted dark-stained agar in a Petri dish, and when the agar has set, holding the dish to the light. I would modify that slightly. The India ink method would be illustrated by coloring the agar with large irregularly shaped carbon particles, as large as the diameter of the thickest piece of glass rod. The nigrosin method would be analogous to using much smaller particles to color the agar, permitting the production of a thinner film, and rendering visible a thinner glass rod. If, now, we stained the agar with a soluble (*i.e.* non-granular) dye, we might get a still thinner film, and sufficient contrast to render visible a fine thread of glass.

The preparation of the nigrosin is very simple. Shake up an excess of the nigrosin with distilled water, and allow it to settle. The upper stratum can then be pipetted, or carefully decanted; or, as I prefer, the preparation can be used without decanting, but always observing caution in handling, so as not to stir up the sediment. It is well to avoid contamination of all sorts, as there is a tendency for the nigrosin to become more coarsely granular. Figure 10 shows rod-shaped pieces of nigrosin, but these can cause no confusion with bacteria, because bacteria never take up the stain—therefore always appearing uncolored.

In preparing a slide, the same technique is used as with India ink. To get a thin smear for small bacteria, a platinum loopful of the material to be examined is mixed on the slide with less than a loopful of nigrosin solution, and spread with the edge of another slide to a pale-blue film. The slide, of course, must be clean. A convenient way to avoid the use of too much nigrosin is to touch the loaded platinum loop to a corner of the slide, depositing all excess and mixing the remainder with the material to be examined. In examining blood or fœces, it is better to dilute with normal salt solution or distilled water before adding nigrosin, in order to separate the individual particles. For thick films, such as are best for large organisms (trypanosomes), it is sometimes well to use an excess of nigrosin solution. After the film is dry the oil immersion objective can be used directly, or balsam and cover glass added. My preparations have shown no deterioration in ten months. The nigrosin fluid should be thick and of an oily consistence. I have kept such a solution for nine months without noticing any change in its usefulness.

It would be a distinct advantage if the living and motile treponema could be seen without resorting to the dark-field illumination as generally obtained. Meirowski<sup>13</sup> has stained living spirochætæ with various stains, but the organisms lose their motility in a few minutes. In 1888, Certes<sup>5</sup> had obtained a dark background for the study of living infusoria by the addition of aniline black. Fabre-Domergue,<sup>6</sup> in 1889, had used diphenylamin blue for the same purpose. Shortly after Hecht and Wilenko published their results with India ink, I tried to find a method which would have the simplicity of their technique and yet retain the motility of the organisms. Neither pure aniline black nor diphenylamin blue were at all suitable for spirochætæ or trypanosomes, however, because the pigments were precipitated by the tissue fluids. The nigrosin mentioned above (nigrosin No. 699) did not precipitate and was an improvement on India ink for dry smears. It was very toxic to spirochætæ, however, possibly due to the presence of arsenic. Further experiments with purified aniline pigments will be necessary before it can be decided whether living and motile spirochætæ will be rendered visible by this method. Trypanosomes remain alive twenty-four hours in nigrosin solutions, and bacteria seem to retain their motility for a long time. In fact, the marked susceptibility of spirochætæ, whether from syphilis or the normal mouth, to the toxic action of nigrosin, seemed interesting from a biologic standpoint.

The photomicrographs, besides contrasting the India ink and nigrosin methods, may be useful in showing the difficulty in distinguishing between the *Spirochata dentium* and the *Treponema pallidum*. The *Spirochata dentium* specimens (Figs. 2, 3 and 7) were from a normal mouth. The *Treponema pallidum* specimens (Figs. 4, 5, 8, 9 and 10) were taken from the liver of a congenitally syphilitic infant. Formalin fixation preceded the making of these latter smears.

The following extracts from various writers show the most important points in differentiating between the *Spirochata dentium* and the *Treponema pallidum*. Hoffmann<sup>8</sup> says that the *Spirochata dentium* is thicker in relation to length, therefore more plump appearing, the thin ones being mostly shorter than the *Treponema pallidum*. The ends of the *Spirochata dentium* are more blunt; flagella-like terminations are less common. The spirals of the *Spirochata dentium* are flatter, less regular and narrower.

Plaut<sup>9</sup> says that the *Spirochata dentium* is almost always shorter than the organism of syphilis. It is generally straight, and thicker than the *Treponema pallidum*. The windings are very close in the *Spirochata dentium*.



Gurd<sup>11</sup> says the *Spirochæta dentium* is always thicker than the *Treponema pallidum*. The extremities of the former are not drawn out in the manner of the latter. It never has more than five turns to the diameter of a red blood cell, while the organism of syphilis has six or seven. It is also shorter than the treponema.

Park and Williams<sup>7</sup> say that the *Spirochæta dentium* is somewhat shorter and thicker. It does not terminate in flagella-like ends. The spirals are 1.0 micron long and 0.5 micron deep; while the spirals of the *Treponema pallidum* are 1.0 micron long and 1.0 to 1.5 micron deep. Discussing the preceding differential features, one at a time, we have:

(a) *The Spirochæta dentium is shorter and thicker than the Treponema pallidum.* Many short forms of the latter are found, especially in preparations made from fresh secretions. Greater thickness is hardly confirmed by the photomicrographs or by visual observations. It is not at all unlikely, however, that variations in size do occur in all these forms. Gerber<sup>12</sup> makes two forms out of the *Spirochæta dentium*, the large ones, for which he retains the above name, and a smaller form, which he calls *Spirochæta denticola*.

(b) *The ends of the Spirochæta dentium are more blunt; flagella-like ends are less common than in the Treponema pallidum.* This may be true in stained specimens, but India ink or nigrosin preparations do not show any such distinction.

(c) *The spirals of the Spirochæta dentium are flatter, less regular and narrower.* No difference in regularity could be observed in my specimens. The spirals of the *Spirochæta dentium* seem very slightly flatter. To confirm this point, I used a low-power (two inch) objective and micrometer eyepiece on the specimens prepared for this article, but instead of the ratio of length to height given by Park and Williams (*vide supra*) the following ratio was found: The length of the turns of the *Spirochæta dentium* were to their height as 1 : 0.5; but the length of the turns of the *Treponema pallidum* were to their height as 1 : 0.75. In other words, even in the *Treponema pallidum*, the turns were not as high as long, instead of being 1 to 1.5 times as high. This merely illustrates the narrow margin for differentiation. Even in Figure 9 in which the spiral appears high, it was found to be not quite as high as long. Any distinction that rests on such slight variations in size, is unreliable in practice. Gurd's distinction, that the *Spirochæta dentium* never has more than five turns to the diameter

of a red blood cell, while the treponema has six or seven, would indicate that he believes that the turns of the former are further apart than in the latter; all the other writers quoted above give narrower turns to the same organism.

Levaditi and McIntosh<sup>10</sup> have been able to find forms of *Treponema pallidum* that could not be distinguished from the *Spirochæta dentium*; Gerber<sup>12</sup> also considers the differentiation impossible in many cases, and admits that he has not been able to find the *Treponema pallidum* in mouth lesions as frequently as other workers.

How, then, are we going to diagnose syphilis in mouth lesions, where the *Spirochæta dentium* occurs normally? First, as all are agreed, the surface layer should be rubbed off with a cotton or gauze-covered probe, wet in distilled water. Then the part should be still further curetted, if necessary, until a drop of pure serum appears. If this serum is examined, the *Spirochæta dentium* is not likely to be found. If then, a spirochæta is demonstrated that is over 10 microns in length and has turns that resemble Figure 9, we may be reasonably certain that we are dealing with the organism of syphilis. But the step to emphasize is the obtaining of serum, without surface contamination. In genital lesions, so far as I know, the *Spirochæta dentium* has not been found; and coarse forms, such as are shown in Figure 6 are not at all likely to be mistaken for the delicate *Treponema pallidum*.

#### SUMMARY.

The nigrosin method of demonstrating spirochætæ and trypanosomes gives a much smoother background than India ink.

A thinner film can be made than with India ink, therefore minute details are better seen. Some bacterial flagella are readily demonstrated.

This article also discusses the morphologic distinctions between the *Spirochæta dentium* and the *Treponema pallidum*, with the following conclusions:

In many mouth lesions the *Spirochæta dentium* has been mistaken for the *Treponema pallidum*. To prevent such a mistake it is important to remove the surface layer of a lesion, and examine the clear serum obtained from the deeper parts. If, then, an organism is found that is longer than 10 microns, and with deep windings like those shown in Figure 9, it is reasonably certain to be the *Treponema pallidum*.

## A METHOD OF DEMONSTRATING SPIROCHÆTÆ 633

In conclusion, I wish to express my thanks to Professor Woolley for the syphilitic material, and to Professor Wherry for the trypanosome material, as well as for many helpful suggestions.

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### DESCRIPTION OF ILLUSTRATIONS.

Photomicrographs, 2mm. Apochromat. All magnified 1000 diameters except where otherwise indicated.

Fig. 1. *Spirochæta buccalis*, from normal mouth, India ink preparation.

Figs. 2 and 3. *Spirochæta dentium*, from normal mouth, India ink preparation.

Figs. 4 and 5. *Treponema pallidum*, from congenital syphilis, India ink preparation.

Fig. 6. *Spirochæta buccalis* from normal mouth, nigrosin preparation. The large form is very much like the *Spirochæta refringens*.

Fig. 7. *Spirochæta buccalis* and *Spirochæta dentium* (small) from normal mouth. Nigrosin preparation.

Figs. 8, 9 and 10. *Treponema pallidum*, from congenital syphilis. Nigrosin preparation.

Fig. 11. *Trypanosoma Lewisi*, from blood of rat. India ink preparation. About X 750.

Fig. 12. *Trypanosoma Lewisi*, from blood of rat. Nigrosin preparation. In thin films the erythrocytes do not become crenated.

Fig. 13. Human erythrocyte from tissue fixed with formalin. This shows the cup shape. Nigrosin preparation.

Fig. 14. *Spirillum sputigenum* (?) from normal mouth, showing flagella. Nigrosin preparation, X 750.

Fig. 15. Flagellated protozoan from fæces of guinea pig. Nigrosin preparation, X 750.

1203 Walnut Street.

## AN UNUSUAL FORM OF KERATOMA.

By A. J. MARKLEY, M.D., Denver.

THE following case is reported not because of any considerable importance to be attached to the condition itself, but because of the unusual nature of the pathological process and the rather severe symptoms occasioned by it.

Dr. W. B. M., of this city, while handling an automatic gun, accidentally had his right hand caught in the mechanism, causing a lacerated wound of the ball of the thumb. The injury was dressed without sutures and healed promptly without incident and with but slight scarring. About four months later, at the site of the injury, a nodule the size of a pinhead appeared, deeply imbedded in the skin, rapidly increasing in size, until at the end of six months it appeared at the surface as a pearly-white body about the size of a small pea. The growth itself and the area immediately surrounding it were now exquisitely sensitive to pressure of any kind. Pain radiated up the arm and finally became so severe as to preclude writing or any such use of the thumb, on which account the small tumor was then excised.

Because of its extreme local sensitiveness and the radiating character of the pain it was thought that the growth was connected with a nerve, probably analagous to the neuromata developing in amputation stumps. On section, however, it was found that it consisted of concentric layers of flattened, horny cells, many of which still retained their nuclei, the whole surrounded by an intact layer or capsule of epithelium continuous with that of the surface (Figs. 1 and 2). This accumulation of imperfectly keratinized cells remained within the epithelial layer, and as growth proceeded the mass was thrust downward into the corium, causing the pain which was evidently mechanical in origin and due to pressure on the deep layers of the corium and the subcutaneous structures. Cutaneous horns and other forms of keratomata resulting from a perversion of the process of keratinization, not infrequently make their appearance at the sites of previous injuries. Such an occurrence taking place within the epithelial layer, with downward growth to the extent of definite tumor formation and the production of pain is, however, so far as I can discover, unique.

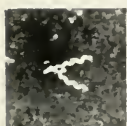


Fig. 1.



Fig. 2.

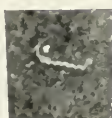


Fig. 3.

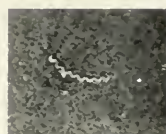


Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.

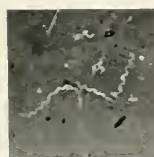


Fig. 8.



Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.

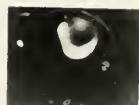


Fig. 13.



Fig. 14.



Fig. 15.

Spirochæta and Trypanosomes Demonstrated by Means of Nigrosin.





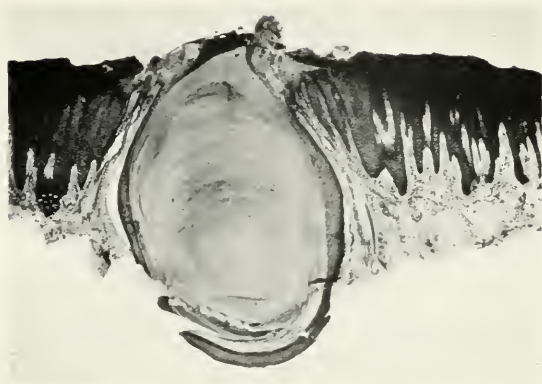


Fig. 1.  
Keratoma.  
Showing position and relative size of tumor.  
Zeiss Obj. aa. No ocular.

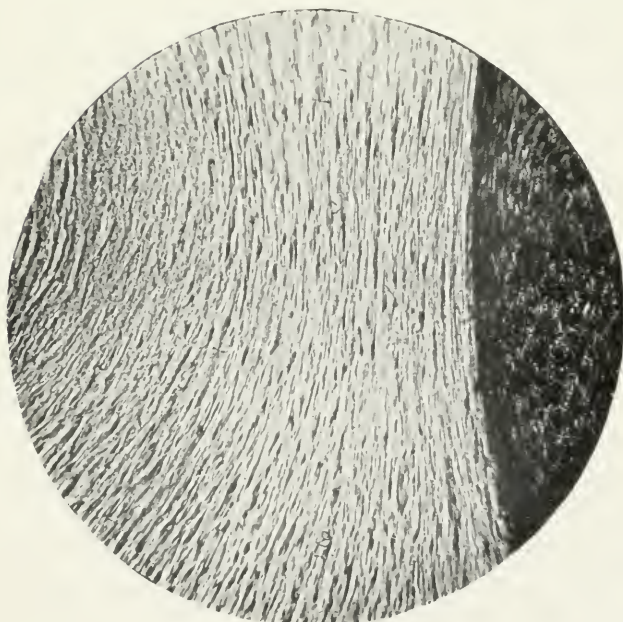


Fig. 2.  
Keratoma.  
Showing structure of tumor body and capsule of  
epithelioma.  
Zeiss Obj. dd. Oc. 1.



## ON THE USE OF THE UVIOI LAMP IN TREATING PSORIASIS, WITH REPORT OF A CASE.

By WALTER JAMES HEIMANN, M.D., New York.

Assistant Visiting Dermatologist, German Hospital, Chief of Clinic, Dermatology, Mt. Sinai Hospital. Attending Dermatologist, German Dispensary.

**Z**SCHIMMER'S uviol lamp as a therapeutic agent is as yet little known among dermatologists both at home and abroad. Professor S. Ehrmann, of Vienna, was one of its earliest advocates and it was in his service that I first saw it employed. Psoriasis and other superficial scaling dermatoses were treated with encouraging results and with the first of these conditions lies our interest.

The apparatus closely resembles the Cooper-Hewitt lamp. It consists of a cylinder, 45 to 65 cc. long made of glass especially constructed to transmit a maximum amount of ultra-violet ray. Usually three lamps are affixed side by side on a suitable stand, the sole purpose of using several lamps being to illuminate the greatest possible area at one sitting.\* The exposures last from fifteen to forty minutes at a distance of from 15 to 20 cc. Under these conditions, an erythema not unlike that of sunburn appears within three hours. After a few days the slightly painful, red skin desquamates. The therapeutic value of the lamp is supposed to reside not only in the nature of the rays, but also in the mechanical effect of the desquamation in the diseased regions. The number of exposures ranges from ten to fifty according to the extent of the surface to be treated and the rapidity of response to treatment.

In a selected case of infiltrated psoriasis, I tried to convince myself of the lamp's efficacy. My method of procedure was the following: At one sitting the entire chest and abdomen, down to the umbilicus were treated; at the next, the area from the umbilicus to the knees, the thighs being rotated outward; then from the knees to the feet. In three more sittings, the corresponding dorsal areas were treated, and in four more, the lateral aspects of the torso and lower extremities. Thus the entire body was divided into ten areas, one area having been treated daily. There is no reason, however, why

\*For further details see Ehrmann, *Die Anwendung der Elektrizität in der Dermatologie*. Vienna and Leipzig, 1909. Joseph Lâfar Ed. p. 167. Leon Friedman, *La Photothérapie*, etc. Vigôt Frères, Paris, 1910, p. 76.

several regions may not be treated in one day. The exposures lasted from ten to fifteen minutes at an average distance of 18 cc. from the body.

The patient was a male, nineteen years old, who began treatment on Oct. 3, 1910. The family history as regards psoriasis, or any of the alleged predisposing causes, was negative. The only point of interest in the past history was occasional joint pains. The present illness, a scaling and, at times, itching dermatosis, was said to have begun in the third month of the patient's life. It had a tendency to grow worse in summer and improved in winter to a slight degree. No treatment, internal or local, ever seemed to have materially influenced the disease.

EXAMINATION. The skin was covered with a thick, dusky-red lesion, so extensive as to include the entire body, except the face, hands, feet, neck, anterior aspect of the chest to the second rib, and the back down to the scapular spines. The uniformity of this lesion was interrupted by an occasional small, irregularly outlined island of normal skin. The borders were circinate and scaling. The entire lesion was furrowed by intersecting lines as in any lichenified process. Over the areas not included in the main lesion, there were more characteristic psoriatic patches, guttate and nummular in type. Those on the face and scalp were oily and yellowish. Elongated scratch marks were found all over the body. The few true psoriasis lesions and the clear luccal mucosa, served to exclude lichen planus which might be remotely suggested by the large, leathery, lichenified, striated area. There was no hair on the pudenda or in the axillæ. The palms and soles were tylotic. The skin was extremely dry.

The general condition of the patient was good. He was well built and muscular. An abdominal and thoracic examination showed no abnormalities. There was no tenderness over the long bones nor over the sternum. A slight general enlargement of the glands prevailed. The blood and urine were normal. I mention these facts to exclude as far as possible a leukæmic erythroderma or premycotic eruption, although with so extensive a scaling, pruritic, infiltrated eruption, an impending granuloma fungoides must always be borne in mind.

In the ensuing sixty-two days, the patient had forty treatments with the uvio lamp, each part of the body receiving four exposures except the hands, which were X-rayed with immediate benefit and the face and scalp, which were speedily relieved by ammoniated mercury ointment.

On October 14th, eleven days after the patient's first visit, I began to give him Asiatic pills according to the recommendation of Illebra. Each pill contained one-eighth of a grain of arsenious acid. I did this although the patent assured me that arsenic had always been poorly tolerated by him and therapeutically without effect. A week later the entire lesion began to involute. The pills were continued at various times, until December 4th, two months after treatment began. From November 20th, I had used the lamp less, for improvement was well under way and chrysarobin and oil of cade were substituted for the radiotherapy. By December 18th, eleven weeks after the beginning of treatment and two weeks after the cure had completed the cure apparently inaugurated by the lamp, the patient was practically well.

Three weeks later, there was a slight relapse, which promptly yielded to ointments. On Mar. 25, 1911, five and a half months after the inception of treatment, the patient was still well, except for a few lesions about his belt line. Pigmentation remained at the site of the old process, the hair in his axillæ and on the pudenda was normal, the skin was now fairly flexible, no longer itched and the dryness, present at the height of the disease, was gone.

The internal treatment of the case, was on the whole, desultory, for the patient as he had predicted, stood the arsenic poorly and it was thus adminis-



tered interruptedly and insufficiently. No topical treatment, save the use of the uvioi lamp, was resorted to until the effects of the latter were clearly apparent. Then, what the lamp had all but accomplished was completed by simpler means. The result was a cure within three months of a case that had virtually resisted treatment for the patient's entire previous life. The permanence of the cure is still *sub judice*, but within the last two months there has been no return of the disease, truly a short enough period, but under the circumstances, not wholly without significance.

We are justified in presuming then, that the uvioi lamp may, at times, be of great use in psoriasis, and I believe that the case reported represents a fairly severe test of its efficacy. Compared with the application of ointments or varnishes containing the classic drugs used in psoriasis, the advantage to the patient lies with the uvioi lamp. The treatment, though no shorter in duration, is pleasanter. The daily application of the rays requires no more time than would be consumed in the proper use of the older methods. The one serious objection lies in the expense of a therapeutic procedure, entailing daily visits to a physician during a prolonged period.

136 W. Eighty-eighth Street.

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## SOCIETY TRANSACTIONS.

### CHICAGO DERMATOLOGICAL SOCIETY.

January 18 and February 15, 1910.

DAVID LIEBERTHAL, *President*.

#### Epithelioma of the Tip of the Nose. Presented by DR. ANTHONY.

The patient was a woman, sixty-five years old. She came under observation about one year previously with a nodular, ulcerating epithelioma involving the tip of the nose. The disease disappeared after the subsidence of an X-ray dermatitis which left an atrophic scar. When presented to the Society a new nodule was present in the scar.

#### Epithelioma of the Nipple. Presented by DR. ANTHONY.

The patient was a woman, thirty-five years old, married, but never pregnant. The lesion of the nipple had been present for four years. It consisted of a pea-sized, superficial ulcer, surrounding the mouths of the lacteal ducts, but the entire nipple was hard and infiltrated; there was no involvement of the breast or axillary glands. The patient experienced darting pains at times. There was no cardboard-like infiltration, no

involvement of the areola, and no granular surface present as in Paget's disease.

**Acrodermatitis Chronica Atrophicans.** Presented by DR. ANTHONY.

The patient was a man, sixty-five years old. He had been a sailor and gave an imperfect syphilitic history. For four years he had had a gradually increasing eruption involving the pubic region, penis and scrotum, and inner sides of the thigh and gluteal region, extending to the anus. The eruption consisted of slightly infiltrated plaques, which were pea- to penny-sized, with central atrophy; in places these lesions were confluent. There were no lesions of the mucous membrane of the mouth.

Some of the members thought that it was a case of lichen planus with atrophy. Others thought it was a late syphilide.

**Rhinoscleroma.** Presented by DR. LIEBERTHAL.

The patient, a nurse, whose family had resided in the States for generations, was twenty-six years old and single. She had nothing to relate regarding her health or that of her family which had any bearing on her present affection except the following:

From childhood to about seventeen years she had suffered from earache from causes unknown to her. About four years ago she lost her voice; even whispering was impossible at times; there was no pain nor coughing. An examination of her larynx was made and she was informed that a vocal cord was affected. Electricity was applied and she recovered the power of speech in about fourteen months. Shortly before the return of the voice, her throat became painful and ulcerated. According to her physician she had "quinsy." The throat gradually improved and ultimately gave no trouble. About two years ago the inside of the nose on the left side became painful and she was unable to breathe through either side; she received X-ray treatment with the result that breathing became easier. About fifteen months ago the nasal openings and the upper lip began to show an eruption. When shown to the Society, the larynx and pharynx were free of evidence of the disease. On the left lower turbinate was a hard mass in contact with the septum and extending to the nostril and upper lip. Upon the lip the flat tumor-mass was superficially exulcerated. Scrapings and cultures from the latter revealed the presence of bacilli of scleroma.

**Raynaud's Disease.** Presented by DR. HYDE.

The patient, Miss R., was twenty-seven years old, poorly nourished, and anæmic. The digits had been affected more or less for ten years. Attacks had most commonly occurred in winter. When shown, the fingers

of the right hand were thickened; the distal phalanges were shrunk and distorted, those of the thumb and index finger presenting large black eschars, partially separated; those of the other fingers showed crusting and scaling areas. The terminal phalanges were distorted, but no active lesions were present. The toes of the right foot showed several scaling areas. The hands and feet were cold to the touch, and the skin of the proximal portion of the fingers was somewhat sclerotic. The possibility of Basedow's disease was suggested by a slight enlargement of the thyroid and the prominence of the eyes. The pulse was 88, with slight arrhythmia; no tremor, no hyperidrosis; no dermatographism; menstruation normal; and bowels regular. Blood examination showed: hæmoglobin 79%; red cells, 3,950,000; white cells, 9500. The process was severe enough to threaten considerable loss of tissue in places.\*

**Annular Syphilide.** Presented by DR. SIMPSON for DR. ZEISLER.

The patient was a mulatto woman, aged twenty-four, who presented dermal lesions on the forehead, around the nose and mouth, and on the nape of the neck. Altogether there were about a dozen lesions, averaging three-quarters of an inch in diameter and forming circles and parts of circles. The centre of each lesion was flattened and in appearance was practically like normal skin. The periphery or border was about one-eighth of an inch wide, of a red color, slightly scaly, distinctly raised and palpable as a firm infiltration. The lesions had been present for about two months. There was a history of a generalized non-pruritic rash five months previously, which had disappeared spontaneously.

**Lupus Vulgaris.** Presented by DR. ZEISLER.

The patient was a negro girl, thirteen years of age. The affection started five years ago about the nose; there was present a certain amount of ulceration on the end of the nose and the upper lip, but the septum and the palate had remained intact. There were infiltrated patches adjoining the nose and some distinct, deeply imbedded nodules. No history of syphilitic infection or heredity was obtainable. In view of the diversity of opinions, anti-syphilitic treatment as a test was suggested, as also was a Wassermann test.

DR. ANTHONY considered the case one of lupus because the lesion was superficial and on the periphery were to be seen the isolated, slightly scaly, cutaneous lesions of that disease.

DR. HYDE believed that the case was one of lues and suggested to Dr. Zeisler that the Wassermann test be made.

\* An examination made some weeks after her presentation to the Society revealed an increased exophthalmos, a developing tremor, and numerous telangiectatic points over the left palm and ulnar half of right palm. The ulcers were healing nicely; part of the bone in the right thumb had sloughed away.

**Pityriasis Rosea.** Presented by DR. SIMPSON for DR. ZEISLER.

The patient was a man, aged thirty-five. The disorder began about three weeks prior to the presentation of the case. A slight itchiness about the upper surface of the chest, anteriorly, first attracted the patient's attention and a rash was discovered which had continuously extended. When the case was presented, the chest and abdomen, the back, the upper arms, and thighs were quite profusely covered with the lesions of pityriasis rosea. The lesions were of the "inoculated" type—no distinct circinate lesions being present. There was, in addition, an inflammatory aspect to certain of the parts affected which, upon inquiry, was found to be due to the previous use of sulphur ointment.

**Chancres of the Lip.** Presented by DR. SIMPSON for DR. ZEISLER.

The patient, a woman aged thirty, stated that the disorder began about three weeks ago as "fever blisters" on the lower lip. At the time of the presentation of the case the lower lip was enormously swollen and the mucous membrane was the seat of three distinct lesions. Each lesion was about three-quarters of an inch in diameter, round in contour, slightly elevated, and sharply defined. The surface of the lesions was flat and presented a raw, dark-red, granular appearance. A yellowish, adherent, false membrane partly concealed the surface. A similar lesion at the middle of the upper lip on its mucous membrane (coaptation chancre) had appeared about a week or two subsequent to the lesions on the lower lip. The whole lower lip was indurated and the submental and subaxillary glands were enlarged and indurated. The patient was a widow and had two children—the younger being a year old. The only clue to the origin of the lesions was the statement of the patient that, in the pepsin factory of the packing house where she was employed, a common drinking cup was used. Another employee had had pronounced "sores" on her lips and had probably contaminated the glass.

**Epithelioma on Lupus Vulgaris.** Presented by DR. LIEBERTHAL.

The patient was forty-seven years old and married. Her parents died at an advanced age. Eleven sisters and one brother were living and in good health. There was no skin or venereal disease in the family. The patient always enjoyed good health; menstruation did not appear before twenty-two. Her skin affection dated back as far as she could remember. It started as a small red spot in front of the right ear. At about twenty it began to spread over the cheek. Soon afterward, she entered the St. Pierre Hospital in Brussels where the lesion was operated by scraping. It healed but the disease reappeared three weeks after, and slowly increased to its present extent. About one year ago it began to pain below the auricle and a little nodule developed which increased

in size. When shown, there was to be noted a button-shaped, flat epithelioma of the size of a nickel, below and adjacent to the lobule of the right auricle in the midst of the lupus area.

DR. ZEISLER, in recording a case of epithelioma upon lupus vulgaris, occurring in his practice some years ago, and referring to many similar observations, pointed out the importance of establishing such a relationship irrespective of the use of X-rays.

DR. PUSEY wished to emphasize the fact that this epithelioma on lupus vulgaris was in a case which had not had X-ray treatment. He had also shown a case of lupus to the Society about two years ago which never at any time had X-rays but which developed epithelioma later—epithelioma of a very malignant type. He believed it worth while to take note of these cases. If these cases had had X-rays, he thought all due weight would have been given to the influence of the Roentgen rays in producing the epitheliomata, and in view of the burden of criticism which might arise in some cases after treatment with radiotherapy, he believed it was important to record such cases.

DR. ANTHONY said the frequent development of epithelioma on lupus was noted long before the X-rays were employed as a therapeutic agent. In the Kaposi's Atlas there were several striking plates of cases observed many years ago in Vienna. He had seen a number of cases in none of which was the epithelioma produced by X-rays. He had shown a case before this Society a few months ago, of lupus of sixty years' standing, with an epithelioma in the lupus patch: the patient had never been treated by the Roentgen rays.

DR. HYDE emphasized the statement that not only might epithelioma develop upon a lupoid patch but also that the combination was one at times of considerable gravity. He cited one of his early experiences in which a boy, eleven years of age, in jumping up to operate the handle of a pump that exceeded his stature, grazed the left cheek with the pump-handle, and in consequence of some infection, a typical lupoid patch developed at the site of the trauma. This very slowly spread and persisted without obvious change until about the fiftieth year of his life at which time he came under the Doctor's observation. The surface of the cheek was uniformly covered with a typical lupus vulgaris, the nodules set closely together and presenting nothing unusual in its features. In the centre of the patch, however, a group of lesions had broken down and an equally typical epithelioma developed. This was in the days that antedated the recognition of Koch's bacillus and the value of the X-ray as a therapeutic measure. The small epitheliomatous lesion was removed by curettage and speedily returned. When fully developed the case was placed in the hands of one of our leading surgeons who extirpated the growth, leaving the lupoid skin untouched. A second operation was required on account of recurrence which was equally a failure; and eventually a radical operation was performed removing all the tissue. The result of this was truly formidable. The epitheliomatous ulcer spread over the whole cheek, penetrated deeply, and finally removed the eyeball on the same side, fractured the jaw on the same side, and finally penetrated below the deep muscles and vessels of the neck so that at the last it was only with the greatest difficulty that the gigantic ulcer could be dressed without a fatal hemorrhage. Eventually the process involved the carotid artery and death occurred.

In view of our experience up to the present time, Dr. Hyde said it was certain that, first, the X-ray treatment of tuberculosis and lupus vulgaris was not responsible for the epitheliomatous changes occurring in the lesions of that disease; second, that the combination was one of great gravity and in all cases to be dreaded; third, that in an inoperable case, at the present time, the scientific physician was in the presence of a situation which promised but little hope.



## MANHATTAN DERMATOLOGICAL SOCIETY.

April, 1911.

DR. ALBERT C. GEYSER, *President*.

## Multiple Syphilitic Dactylitis. Presented by DR. DITTRICH.

The patient was a well-nourished female child, three years of age. The parents were apparently healthy. There was a history of an eruption which had disappeared under mercurial inunctions. When presented to the Society, she exhibited a few scattered maculo-squamous lesions and a well-marked dactylitis of the third phalanx of the left middle finger and on the third phalanx of the ring finger of the right hand. The bone lesions had been present for one year.

DR. GOTTHEIL said that he had previously seen the case at the Post-Graduate Hospital and he had failed to make a diagnosis of syphilis. He was of the opinion that the bone lesions were tuberculous rather than luetic. The swellings appeared to affect the epiphyses rather than the shaft of the bones.

DR. COCKS agreed with Dr. Gottheil.

DR. MACKEE said that although, from a clinical standpoint, the dactylitis resembled tuberculosis more than it did syphilis, he would not care to hazard an opinion until a radiograph had been made. A radiographic examination would, in all probability, differentiate between the two diseases. If luetic, there would be a well-marked primary hyperplasia of the periosteum, with a possible osteitis of the shaft of the bone. On the other hand, tuberculosis would present an osteitis having its origin in or near the epiphysis, with perhaps a secondary periostitis and this periostitis would not be of the hyperplastic variety, but would simply consist of a lifting up of the slightly thickened membrane by fluid. The speaker suggested that the cutaneous lesions might be an example of scrofuloderma.

DR. DITTRICH said that he had made a fluoroscopic examination, as a result of which he was convinced that the shaft of the bone was involved.

DR. GEYSER agreed with Dr. MacKee and added that a fluoroscopic examination could not be trusted.

## Three Genital and Four Extragenital Scleroses in One Patient, Appearing Consecutively in Thirty-nine Days. Presented by DR. GOTTHEIL.

Albert R.; twenty-six years of age; single. He denied previous venereal disease, and presented the following symptom-complex: 1. A large, ulcerated, typically indurated, and slightly tender tumor of the lower part of the inner preputial layer. 2. On the middle of the sheath of the penis and its lower aspect, was a hickory-nut-sized, typically indurated tumor, the eroded surface of which was cicatrizing. 3. A lesion precisely similar to No. 2, but larger, at the base of the penis on the upper aspect of its sheath. 4. On the centre of his left cheek was an oval, filbert-sized mass, with the same induration and an eroded surface. 5. Under his chin, and a little to the left of the middle line

was a small hickory-nut-sized, indurated and eroded lesion. 6. Two centimetres to the left of the last lesion was another one of precisely the same size and character. 7. In the centre of his lower lip was a small hickory-nut-sized mass, very hard and insensitive, with its entire centre ulcerated, but covered with a dry, glazed, grayish-red crust. Every one of the foregoing seven lesions were perfectly characteristic scleroses, modified in each instance by location. 8. A general macular syphiloderm. 9. A characteristic general adenopathy. 10. Angina syphilitica. 11. Severe nocturnal bone pains. 12. Great loss of appetite and decline in weight since the lesions appeared; he had to give up work from weakness. These symptoms were all present when the patient was first seen on April 7th; one week later, no anti-luetic treatment having been employed, extensive mucous patches appeared on the inner surfaces of both lips.

The patient was fairly intelligent, and gave accurate dates of the appearance of the lesions. The preputial one was the first. It was also the largest and the most characteristically indurated and appeared about February 5th. On February 13th, the second one developed at the root of the penis; four days later came the third upon the sheath. On March 5th, he first noticed the tumor on his cheek; about a week after that, came the two lesions under his chin; and it was March 16th, before his lip became sore. While he could not vouch for the absolute accuracy of some of these dates, the patient was quite certain that the first lesion was noted on February 5th, and that the last one, that on the lip, did not appear until the middle of March. He was aware of his sore throat and osteoscopic pains, but not of his roseola or adenopathy. There had been no treatment save the use of carbolic wash, given him by some physician for a few days when only the first sore was present. The treponema was demonstrable, though with difficulty, in the facial lesions. The speaker said that it was his purpose to treat this case, which was certainly an infection of very malignant type, with one or a very few massive mercurial doses, and watch the results.

DR. MACKEE said it was a remarkable and a most interesting case, in which there could be no question regarding the diagnosis. The fact that the last sclerosis had developed thirty-nine days after the appearance of the first chancre would naturally suggest a malignant type of the disease, inasmuch as the protective functions of the body were not vigorously reacting.

DR. PARONAGIAN was not willing to consider all the lesions as being chancres. The lesion on the cheek and those on the shaft of the penis suggested the karion type of ringworm.

**Syphiloderm Frambœsioides.** Presented by DR. GOTTHEIL.

Sarah R.; married; forty-eight years of age. She had had the affection for over two years; no connected history was obtainable. The entire skin of the left leg, from below the knee to the ankle, was occu-

pied by a cicatricial and hypertrophic lesion. The whole central lesion was an irregular mass of scar tissue, in the midst of which were isolated, circular and irregular elevations, composed apparently of dry vegetating tissue. Among most of the margins of the lesion were scalloped masses of similar dry elevations; and the patient stated that the disease progressed by the advance of these vegetations, which sometimes ulcerated and were followed by the scar tissue. On account of the presence of many new vegetating tumors in the scar tissue, a lupoid process was suspected; but careful examination failed to reveal any distinct tuberculous lesions anywhere, and the age of the patient and the fairly rapid spread of the disease were against that diagnosis. Improvement had been very marked under massive doses of mercury salicylate, hypodermatically administered (three 4-grain doses in two weeks), together with moderate iodide medication.

DR. MACKEE said that the most interesting and instructive feature of the case was the fact that new lesions developed in the scar tissue left by the ulceration and spontaneous healing of former lesions. This, of course, was strongly suggestive of a tuberculous process. On the other hand, the absence of distinct tubercles and of typical atrophy, the age of the patient, the involvement of such an extensive area during a period of two years, together with the scalloped margins and the rapid involution under anti-luetic medication, would confirm the exhibitor's diagnosis.

DR. KINCH said that he had previously seen the patient at the Lebanon Hospital, at which time the lesions strongly resembled lupus. It had now, however, more the appearance of a syphiloderma, and the rapid improvement under treatment would prove the diagnosis of lues to be the correct one.

#### Keloid Developing on the Scar of a Tubercular Syphilide.      Presented

by DR. DITTRICH.

The patient was a woman, twenty-seven years of age, who had been treated at the Post-Graduate Hospital for an extensive luetic ulcer of the right leg and a small ulcerating tubercular syphilide on the left elbow. When presented to the Society, a distinct keloid could be seen in the scar on the elbow.

DR. MACKEE recalled a case that had been under his observation a few months previously, at Dr. Fordyce's clinic. There was an ulcerating syphilide of the left arm close to the elbow. A keloid developed in the scar a few weeks after healing had occurred.

#### Case for Diagnosis.      Presented by DR. OCHS.

Mrs. L.; forty-six years of age; mother of five healthy children. Twenty-nine years ago she noticed a small papule or pustule on her left shoulder. This she irritated by scratching; a small keloid developed upon the site. Since that time, numerous keloidal masses had appeared all over her body. There were numerous, small, brownish-red, exceed-

ingly sensitive papules scattered over the trunk. The patient stated that these had developed spontaneously and that they would occasionally disappear without treatment, but a keloid would develop upon the site. She was always able to foretell the development of one of these papules by the presence of severe pain. The very young papules were of a pinkish hue. The patient had had several abdominal operations and a keloid had developed in each one of the scars. While most of the tumors were small, they varied in size, the largest one measuring  $4\frac{1}{2}$  by 2 inches. Most of the large keloids were composed of the confluence of several small tumors. Dr. Ochs had considered the possibility of sarcoma cutis, neurofibromata and keloid.

DR. GOTTHEIL said that he had seen this case a number of times at the Lebanon Hospital. It was a typical one of most extensive keloids, many of them demonstrably originating in her several operative, vaccination, and other scars, but others apparently developed spontaneously, so far as could be seen. A prominent and peculiar feature of the case all along had been the excessive tenderness of all of the lesions; this, with the development of new lesions without evident cause, was quite unusual in ordinary keloid and had led to the suspicion of neurofibroma. During the last few months the old lesions had extended, had become even more tender, and had in many places assumed a purplish tinge. He now regarded the case as sarcomatosis secondary to keloid.

DR. MACKEE regarded the case as one of so-called spontaneous keloid. The patient apparently developed a keloid as a result of the most trivial injury. Although it was unusual to observe such excessive tenderness, yet it was not uncommon to note considerable sensitiveness to pressure and even spontaneous pain. Keloids varied in color from white, pink, red, brownish-red to purple and the coloration in this case did not strike the speaker as being unusual.

DR. OULMANN said that neurofibroma was not painful and he would suggest a diagnosis of neuromata following ulcerations.

DR. DITTRICH agreed with the diagnosis of keloid and noted that most of the tumors were on locations that were susceptible to slight injuries, such as scratching.

DR. GEYSER recalled a case that he had presented to the Society several months previously in which the keloids were constantly increasing in size and number.

DR. PISKO considered the case to be one of neurofibroma.

#### Case for Diagnosis. Presented by DR. OCHS.

The patient was an adult male, seventy-seven years of age. Two years ago a papule developed upon the inner surface of the right thigh. This had evolved into a lesion two inches long and three-quarters of an inch in width. It was sharply defined, somewhat elevated, there was a verrucous surface and the patch was surrounded by an erythematous areola. A few inches from this patch were three small, hard, smooth, reddish-brown nodules.

DR. MACKEE considered the case to be one of lichen planus verrucosus.

DR. OCHS said that his original diagnosis had been lichen planus verrucosus, but because of the absence of itching and the fact that some features of the case resembled seborrhœa, he had questioned his first opinion.

**Epithelioma Treated with the X-ray.** Presented by DR. GEYSER.

This was the patient that Dr. Geyser exhibited at the March, 1911, meeting of the Society, at which time there was some discussion regarding the diagnosis. Some of the members considered the case to be one of lues while others thought the lesion was an epithelioma. Since the previous presentation, a Wassermann test had been made which was negative. The patient had not been given anti-syphilitic treatment. The lesion was now almost healed as the result of eight X-ray applications, which would confirm the diagnosis of epithelioma.

**Seborrhœic Eczema or Psoriasis?** Presented by DR. KINCH.

The patient was a male, fifty-seven years of age. He presented a well-defined, crusted lesion, the size of a silver dollar, on the forehead and a smaller lesion on the back, near the spine. The crusts were made up of dry scales, which, however, were not micaceous in character. The patches had been present for three weeks. The scalp was not involved. There was no history of a previous attack.

The consensus of opinion was in favor of seborrhœic eczema.

**Seborrhœic Eczema.** Presented by DR. KINCH.

The patient was a male, forty-five years of age. He exhibited a papulo-squamous eruption in the bends of the elbow and on the flexor surfaces of the forearms. Lesions were also present on the shoulders and outer surfaces of the thighs.

DR. MACKEE thought that the eruption was an eczema, secondary, probably, to scabies.

DR. KINCH said that the distribution of the eruption and the pruritus would suggest the possibility of scabies.

**Seborrhœic Eczema with Rupial Crusts.** Presented by DR. KINCH.

The patient was a woman, fifty-seven years of age. The eruption was under the breasts, on the abdomen and on the upper part of the thighs. Lesions were also present on the backs of the shoulders. The smaller lesions, those the size of a ten-cent piece, were scaly, while the silver-dollar-sized patches were covered with oyster-shell-like crusts which, when removed, left a moist surface. The eruption had been present for one month. She had had a previous attack one year ago.

DR. WEISS said that the case bore some resemblance to the case of parakeratosis scutularis that he had presented to the Society a year ago. The present case was regarded by the speaker as being one of seborrhea.

**Lichen Planus.** Presented by DR. BLEIMAN.

The patient was a man, sixty years of age; born in Russia; in the United States for seven years. The duration of the attack was six weeks.



The eruption was typical and was generalized. There were also lesions on the glans penis, on the dorsum of the tongue and the mucous surfaces of the cheeks. Pruritus was not complained of.

**Lichen Planus Verrucosus.** Presented by DR. BLEIMAN.

The patient was a male, fifty-four years of age. He was born in Russia, but had immigrated to the United States eight years ago. The eruption consisted of six distinct patches; four on the right lower leg and two on the left lower limb (anterior surfaces). The largest lesion was four inches in diameter, while the smallest was one-half inch in width. The lesions were considerably elevated above the surrounding surface, violaceous in color and were composed of large confluent papules. The scales were grayish-white in color and firmly adherent. The patches were hard and irregular, producing a verrucous appearance. The tongue, lips and cheeks were involved, but the glans penis was unaffected. The patient had had a similar attack eight years ago. The duration of the present eruption was eight months.

**Case for Diagnosis.** Presented by DR. WEISS.

The patient was a woman, fifty-eight years of age. She exhibited superficial ulcerations on the tongue and mucous surfaces of the cheeks. Some of the lesions were discharging pus, while others were covered with an exudate which could be easily removed. There was a general inflammation of the buccal mucosa. The eruption caused considerable pain and had been present for eight months. There was no eruption elsewhere on the body. Anti-syphilitic treatment had failed to give relief. The local use of silver nitrate had been of some benefit.

DR. OULMANN thought that the case was one of simple stomatitis.

**Lichen Planus Annularis (Two Cases).** Presented by DR. OULMANN.

The first patient was a woman, forty-five years of age. She exhibited several well-marked, annular lesions on the left leg below the knee. The rings were formed by the coalescence of individual lichen papules. Considerable pigmentation was present. The eruption had been present for six months.

The second patient was a man, forty-three years of age. On the inner side of the right lower leg, there was a patch of hypertrophic lichen planus. On the knee of the same limb, there were several faint, annular lesions, some of which were of a brownish color while others were violaceous. There was very slight scaliness. The duration of the disease was four years.

**Rupia Syphilitica.** Presented by DR. OULMANN.

The patient was a man, thirty-nine years of age. There was a history of a chancre twenty years ago and occasional outbreaks of cutaneous lesions since that time. Four years ago he developed an ulcer in the pubic region which healed under the influence of mercury. A few months later, new lesions appeared in the same location. These had gradually grown worse on account of neglect. When presented to the Society, there was one large, sharply-marginated, irregular area covering the lower abdomen, the pubic region, the upper portion of the thighs and the penis. The entire lesion was heavily crusted. There was a distinct tendency toward involution at various points in the involved area. The margin, however, was active. The speaker said that there had been considerable ulceration, but that improvement had occurred following the administration of mercury.

DR. GOTTHEIL said that syphilitic rupia was associated with ulceration and scarring; neither condition was present in this case. He regarded it as an eczema marginatum with unusual arrangement of the scales.

DR. KINCH said he believed that the case was one of eczema marginatum.

DR. MACKEE thought the case resembled a serpiginous syphilide.

**Small Papular Syphilide.** Presented by DR. OULMANN.

The patient was a man, twenty-eight years of age. He developed a chancre five years ago. When presented to the Society, there was a typical, small papular syphilide with a few papulo-squamous lesions. The speaker thought that the case was of interest because of the late appearance of the eruption.

REVIEW  
OF  
DERMATOLOGY AND SYPHILIS.

Under the charge of GEORGE M. MAC KEE, M.D.  
BACTERIOLOGY AND GENERAL THERAPY.

By R. C. JAMIESON, M.D., Detroit.

The Treatment of Epithelioma by Curetting, Followed by Cauterization with Chromic Acid and Later, by Exposure to X-rays.  
G. D. CULVER, *California State Jour. Med.*, 1911, ix, No. 8, p. 340.

Chromic acid as a cauterizing agent is employed for the following reasons: It produces enough destruction to remove all pathological tissue remaining after curetting, and after it acts it forms a tough crust countersunk in the tissues, effectively closing the wound and preventing sepsis without causing any dangerous systemic effects. He first applies a local anæsthetic, then curettes away all friable tissue and places *fresh, bright-red* crystals of chromic acid on the raw surface, pressing them well down. The surface of the ulcer should be previously rendered completely dry by the application of cocaine and adrenalin. A thick, black, protecting crust is formed, firmly closing the wound. Pain is of short duration and the reaction soon subsides. He then uses the X-ray as a subsequent treatment in order to make a less disfiguring scar, as by this method the scars are far superior to those following any other treatment. He does not advocate the use of this method of treatment where metastasis has taken place.

A Clinical Review of Vaccine Therapy. H. C. MOFFITT, *California State Jour. Med.*, 1911, ix, No. 7, p. 268.

H. C. MOFFITT, *California State Jour. Med.*, 1911, IX, No. 7, p. 268.

The author takes up the general question of treatment by this means and his remarks may be summarized as follows:

The vaccines are now made by being prepared with sterilizing chemicals instead of being sterilized by heat, as heat destroys some of the active properties of the bacteria. Autogenous vaccines are to be preferred to stock, but stock vaccines should be used if no others are available. There is an increased tendency to give small doses frequently repeated, as the large doses at longer intervals produce too pronounced negative phases, while the smaller doses, gradually increased, with no pronounced reaction, produce better and more permanent results. Large doses are occasionally necessary in some general infections. He takes up the

various diseases in which infection was due to the staphylococcus, streptococcus, pneumococcus, gonococcus, typhoid and colon bacilli, but thinks that more care should be used in the preparation, dosage and administration of autogenous vaccines and that more careful diagnoses should be made to determine the ætiological factor in the disease in question.

**The Treatment of Furunculosis.**                    FRITZ BRUCH, *München. med. Wchnschr.*, lviii, No. 25, p. 1360.

Bruch does not favor the use of wet dressings in the treatment of furunculosis on account of the tendency to autoinoculation and the difficulty experienced in keeping such dressings in place. He has obtained excellent results in the treatment of such cases by the use of an ichthyol and plaster dressing which he applies as follows: A wide area around the furuncle (which may be in any stage of development) is thoroughly cleaned and, if necessary, shaved. Pure ichthyol is then painted over the area and, without any cotton or gauze covering, is completely covered with one piece of plaster or several pieces overlapping. Pain disappears in an astonishingly short time, in most cases in three to four hours. This dressing is changed the next day and a purulent discharge is found under the plaster. The plaster is then changed daily, or every second day, and healing of the ulcer quickly follows. No cotton or gauze is used unless the ulceration and secretion are very great.

**The Principles of Vaccine Therapy.** HANS REITER, *Berl. klin. Wchnschr.*, xlviii, No. 27, p. 1235.

Reiter considers furunculosis, acne, sycosis, tuberculosis of the skin, localized abscesses, tuberculosis of the nose, eyes, and glands, and infections with the pneumococcus, micrococcus catarrhalis, gonorrhœa and some general infections.

The best results are obtained in treatment with autogenous vaccines and is absolutely necessary in colon infection. If such vaccines cannot be obtained, or if an immediate injection is indicated, polyvalent suspensions may be used. Immunization should be begun with a small dose and slight reaction, increasing the dose according to the individual requirements without causing a prolonged negative phase. All doses should be regulated so that the negative phase should not be longer than 24 hours—if it lasts longer the dose is too large. Increase of dosage is necessary if the action of the preceding dose has been too slight. The dose should not be repeated in less than five days; the larger the dose the longer should be the interval between injections. General infections are not to be treated by the general practitioner.

SYPHILIS OF THE SKIN AND MUCOUS MEMBRANES,  
ATROPHIES, HYPERTROPHIES, MALIGNANT AND  
BENIGN NEW GROWTHS.

By UDO J. WILE, M.D., New York.

**Experimental Studies on Leucoderma Syphiliticum.** FERDINAND WINKLER. *Festschrift* for Prof. P. G. Unna, 1910, xx, No. 1, p. 104.

The author goes very fully into the literature concerning the theories of the development of syphilitic leucoderma. Histological studies seem to have failed satisfactorily to solve the problem, and the writer believes the subject should be attacked from the experimental side. The experiments of Buschke concerning the effect of various light rays upon the vitiligo patches, led Winkler to repeat these experiments upon patches of syphilitic leucoderma. Exposure of such lesions to the X-ray, the arc lamp, the mercury-vapor lamp, and the quartz lamp produced absolutely no change. A second series of experiments were based upon those of Meirowsky, who showed that pieces of excised skin became deeply pigmented when placed in the thermostat, while control pieces placed on ice retained their original color. In repeating this experiment with leucoderma, Winkler found that after two days in the thermostat, the normal skin around the lesion showed to the naked eye and microscopically a definite increase in pigment, whereas the lesion itself remained entirely pigment-free. The outcome of this experiment is, however, dependent upon the age of the lesion, since it has been shown by Brandweiner, that in the new lesions of leucoderma syphiliticum, the difference in pigment-content between the lesion and the outlying normal zone is not very definite, and for this reason only old lesions are suitable for examination in demonstrating the post-mortem development of pigment. From this experiment one must conclude that in the centre of the leucoderma patch, either the rete cells do not contain a mother-substance which by autolysis can, under the influence of heat, produce pigment, or that, if biological processes play a rôle in the production of post-mortem pigment, then the basal layer of the rete has lost the function of pigment production.

Whether the specific inflammation alters the chemistry of the cell so that for a given time it loses the power to produce pigment, or whether according to Majeff and Hjelmann, vascular changes, with subsequent obliteration and atrophy, play the important rôle in the disturbance of the rete cell function, cannot be definitely settled by the results of research up to the present. Haslund's observation, that he found at times in the centre of the leucodermatous lesions, a slight depressed scar, speaks, according to Winkler, for the latter view.



Two Relatively Rare Cutaneous Tumors. JOHANNES FICK. *Festschrift* for Prof. P. G. Unna, 1910, xx, No. 1, p. 277.

Fick reports two unusual tumors arising in the skin which were studied by him. The first tumor occurred on the back of the thumb, in a nurse; it had begun two years previously as a small, red spot, which developed very slowly, until the time of the excision, when it had reached the size of about half a pea. Microscopically, the lesion revealed itself as composed of a connective tissue stroma not unlike a fibroma. The unusual feature, however, consisted in the presence in the centre of the tumor, of definite areas of ossification. Fick distinguishes this tumor from true osteoma and osteochondroma described by others as rare tumors of the skin, both in its histology, which he describes as osteoid rather than true bone, and, moreover, in its localization, which does not correspond to that of other cutaneous bone tumors. Unable to classify this neoplasm with the other bone tumors of the skin, Fick designates his case as one of, "ossifying skin tumor."

The second case described by the author is one of "adenoma hydradenoides." The pea-sized lesion was excised from the cheek of a sixty-year old man, and diagnosed clinically as epithelioma. Microscopic examination revealed the presence, deep in the cutis, of a circumscribed tumor mass, surrounded by a connective tissue capsule. The tumor itself revealed a richly developed connective tissue stroma and an epithelial parenchyma. The cells of the latter were arranged in tubules, which in places showed cystic dilatation. Although a definite connection between the sweat coils could not be shown in any single place, nevertheless the very distinct resemblance of the cell constituents of the tumor to those of the normal sweat gland justifies, according to the author, the designation "adenoma hydradenoides." The only other microscopic entities to be differentiated were angioma, and the basal cell epithelioma, from both of which, however, the distinctive features were easy of separation.

A Case of Pigmented Sarcoma (Kaposi). MENDES DA COSTA, *Festschrift* for Prof. P. G. Unna, 1910, xx, No. 1, p. 212.

Da Costa describes the clinical and histological picture in a case studied by him of the Kaposi type of pigmented sarcoma. The patient was a seventy-six year old man and the lesions consisted in dark-red infiltrations of the hands, feet, legs and forearms, which had developed during three years' time, their début having been marked by considerable œdema and great pain. Arsenical medication extending over three months, sufficed to cause entire involution of all the lesions, although during this time the patient had two attacks of erysipelas, which the author suggests may have had something to do with the disappearance of the lesions. He believes this type of neoplasm to be of endothelial origin, *e.g.*, an irritative swelling and hyperplasia of the endothelium leading to great dilata-

tion of the lymph and blood vessels. His histological studies in this case bear out entirely this view.

**Keloids Following Mercurial Injections.** E. WELANDER, *Festschrift for Prof. P. G. Unna*, 1910, xx, No. 1, p. 288.

To the many already known mechanical and chemical causes which can give rise to keloids, Welander adds mercurial injections as an additional cause. In all, he observed thirty-one keloids in twelve different individuals, of whom eight were women, and four were men. In the majority of the instances, the keloid was preceded by the formation of an abscess which broke through the skin. In one case, in which an abscess was lanced, the resulting keloid developed along the line of incision. In three of the twelve cases, older keloids, due to other causes, were present. In every case the buttock was the affected region and the number of the lesions varied from a single one to eight. Concerning the ætiology of such keloids, Welander assumes that a predisposition to such formation must always be present; abscess-formation having been present in all the cases seems to indicate that this is a necessary ætiological factor. In many cases of abscess formation Welander was able to demonstrate globules of metallic mercury in the abscess contents. He regards this chemical change as possibly the inciting cause of the development in such cases of keloid.

**The Relation of the Cutaneous Horn to Skin Cancer.** FRANZ VON VERESS, *Festschrift for Prof. P. G. Unna*, 1910, xx, No. 1, p. 401.

True cornu cutaneum resembles in its ætiology skin cancer. Both occur principally in old persons and both have predilections for similar parts of the body. In the development of both, local irritation, such as wounds or scars, may play a rôle. In both, the point of origin may be a senile keratoma, a papilloma, or a verruca. At the base of both epitheliomata and horns, one finds, as a rule, similar changes in the connective tissue, namely, proliferation and infiltration with lymphocytes, leucocytes and plasma cells. Considering their similarity in ætiology, structure and topography, it is easily conceivable that at times either of these processes may develop into the other, that is, a horn may develop on top of an epithelioma, or the former may undergo epitheliomatous degeneration. Of these two possibilities, the latter occurs probably the more frequently.

Von Veress draws the foregoing conclusions from a review of 109 cases of cutaneous horn collected by Lebert, and by a study of six cases of his own. Of the latter, two are described in detail, in which the histological picture showed a combination of cornu cutaneum and epithelioma.

**Concerning Multiple Benign Miliary Lupoid (Boeck).** G. NOBL, *Festschrift* for Prof. P. G. Unna, 1910, xx, No. 1, p. 348.

This paper includes the report of a typical case of sarcoid tumor observed by the writer, together with a general discussion concerning the aetiology, anatomy, etc., of this class of tumors. The author's case occurred in a young woman of twenty-four, in whom the lesions developed to their full size in four months. The lesions were found symmetrically on the face and were of two types; pin-point to hemp-seed sized, reddish papules, and larger, diffuse, purplish, infiltrated plaques. On pressure under glass, it was observed that the lesions were made up of minute, yellowish foci, as described by Boeck as typical for the disease. Histologically, the tumor was made up of discrete nodules, separated by septa of connective tissue and made up of epithelioid cells and giant cells of the Langhan's type. There was no evidence of caseation or necrosis, tubercle bacilli and Much's granules were not demonstrable. Inoculations into guinea pigs of pieces of the tissue were absolutely negative, and repeated tuberculin injections practiced on the patient herself, gave neither local nor general reaction. Arsenical medication at first produced no change in the appearance of the lesions, but involution occurred after treatment extending over eight months, slight pigmentation in spots being the only evidence of the disease remaining.

**Concerning the So-Called Human Botryomycosis.** G. B. DALLA FAVERA, *Festschrift* for Prof. P. G. Unna, 1910, xxi, No. 2, p. 70.

Dalla Favera bases the following conclusions upon the study of three cases of the so-called human botryomycosis: There is a great variation in the histopathology of the cases of botryomycosis, even though clinically the cases may not vary greatly. Thus, in the three cases studied by the author, the histological picture in the first case suggested fibrosarcoma, in the second, hæmangioendothelioma, and in the third, perithelioma, although the clinical picture in all three was practically the same. Under certain circumstances, a distinct histological resemblance to the structure of iodiopathic hæmorrhagic sarcoma can be definitely established. Despite this fact, however, and despite the fact that the organism is as yet unknown, these tumors probably belong to the infectious granulomata rather than to the new growths.

**A Case of Solitary Dermatomyoma.** L. MOBERG, *Festschrift* for Prof. P. G. Unna, 1910, xxi, No. 2, p. 138.

According to Besnier's classification, dermatomyomata are of two types: simple myoma, usually multiple and dermatomyoma, or single tumors arising in places where there is preëxisting smooth muscle. The former are properly speaking, the true dermatomyomata, and of these the literature contains twenty-two examples, to which the author adds one



PLATE XLV.





more case. The patient was a young woman, who consulted the Polyclinic for a painful area in the right calf. She had noticed a small, hard nodule for several years, which was painful to the touch. Extirpated, the tumor measured, 5 by 3 by 2 mm., in its three dimensions. Histologically, the picture showed a circumscribed tumor composed of smooth muscle, lying in the deeper part of the corium. The bulk of the tumor lay deeper than the arrectores pilorum, and no evident connection could be made out between the tumor and the latter. An increase in the pigment of the basal layer of the epidermis, as described for such cases by others, was not demonstrable. A distinctly greater vascularity within the tumor itself, was present in the author's case, than was found in the other cases described, and he believes the probable point of origin of the neoplasm to have been the muscularis of the vessels. Quite characteristic for dermatomyomata, is the presence of peculiar paroxysms of pain, which according to Unna are dependent on tension on nerve branches by the growing tumor. In this view the author concurs.

**A Case of Idiopathic Atrophy of the Skin.**      ARTHUR JORDAN, *Festschrift* for Prof. P. G. Unna, 1910, xxi, No. 2, p. 330.

This is a report of the clinical and histological findings in a case of idiopathic atrophy, occurring in a woman of fifty-six years, following exposure to great cold. In practically every detail does the author's case correspond to those in the literature acknowledged to be types of the disease in question.

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OBITUARY.

EDMUND L. COCKS, M.D.

Dr. Edmund L. Cocks, after a protracted illness which he bore with exemplary fortitude, died at his summer home at Rockaway Park on July 5, 1911. He was born in New York City on April 30, 1856, of Quaker parentage, and was educated in the Public Schools and at the City College. He graduated from Bellevue Hospital Medical College in 1885. Dr. David Cocks, and Dr. George H. Cocks, his two brothers, who survive him, are physicians and well-known ophthalmologists. His first wife died in 1897; and in 1899 he married Mrs. Anna Donnelly, the widow of George W. Donnelly. His widow, a son, daughter, and step-daughter survive him.

Dr. Cocks was an earnest worker in Dermatology from the beginning of his professional career, and preserved his interest in it until the end. He was for many years connected with the Skin and Cancer Hospital on Dr. Bulkley's Division; he was Professor of Dermatology at Fordham University, and Chief of the Dermatological Clinic there; he was Visiting Dermatologist to the Randall's Island Hospital, and Chief of the Harlem Hospital Dermatological Clinic. He was recently appointed Consulting Dermatologist to the Harlem Hospital. He was one of the most active members and a past President of the Manhattan Dermatological Society, and of the Dermatological and Genito-Urinary Society, of this City. In the Harlem Medical Association he had also occupied the

Presidential chair; and he was a member of the American Medical Association, Fellow of the New York Academy of Medicine, etc.

Dr. Cocks did not write much; and his inherent modesty led him rather to be a listener than a speaker. A paper on "Pemphigus of the Mouth" published a few years ago may be mentioned. But he endeared himself to his associates and to those who worked under him by his unfailing courtesy, his deference to opinions opposed to his own, and his unselfish interest in all matters dermatological. To the end of his life he remained an earnest learner and worker in his chosen field; and in his demise the specialty loses a quiet but most useful follower.

W. S. G.

### BOOK REVIEWS.

**A Monograph on Albinism in Man.** Drapers' Company Research Memoirs, Biometric Series VI. By KARL PEARSON, F. R. S., E. Nettleship, F. R. C. S., and G. H. USHER, M. B. B. C., Camb. Two Volumes: Part I of Text and of Atlas. Dulau and Co., London, 1911.

The two volumes represent the first part (two plates and pages 1 to 266, photographic plates A to Z and AA to ZZ) of what promises to become a fundamental and monumental work on albinism in man, a condition the character of which is by no means well understood. A great deal of work as well as expense has been involved in the preparation of the work and this has delayed its completion; the publication in sections has finally been decided upon by the authors with a view to providing funds for the further printing of the monograph by the attraction of subscribers to the total work.

An introductory chapter explains the aim and scope of the author's work. After showing the difficulties of demonstrating the total absence of pigment in eye, hair and skin they finally adopt as the definition of a complete albino: one whose skin is of characteristic pallor or milky whiteness, whose hair is "white," tinged probably with yellow or straw, and whose eyes have pink or red pupils, translucent irides, with the usual accompaniments of defective vision, nystagmus and ametropia. Incomplete albinism involves all the cases in which these conditions are not completely present. Here considerable subdivision is necessary, although not on absolutely rigid lines. The incompleteness of albinism may depend upon its application to the three characters: hair, eye and skin, or upon its absence in any one of these parts, or upon its being local, restricted to portions only of any one of the three characters (partial albinism).

In chapter 2 on early notices of the occurrence of albinism, the authors show the lengthy history of albinism, indicate some of the quaint by-paths of albinotic traditions, and incidentally throw some light on the appearance of albinos and their treatment in widely separated lands. They eliminate the existence of any albino race or nation.

Chapter 3 on geographical distribution of albinism, is divided into three sections: the light-skinned, the yellow and red-skinned (Asiatic Polynesian, Australian and American) and the black-skinned races. The final result of all research is that we know that albinism occurs in almost all countries and suspect it of occurring in all, but we are very far from knowing the relative frequency of albinos geographically.

In chapter 4 (The Albinotic Skin, Theoretical and Historical) after disposing of theories looking upon albinism as a disease, *e.g.* leprosy, or as a cachexia or as arrest of fetal development, the authors review the microscopic inquiries into the position and transfer of pigment and the biochemical investigations into the nature of melanin pigment. They come to the conclusion that the chief, if not the sole source of albinism is the inheritance of an abnormal tissue structure.

Chapter 5 is inscribed: Leucoderma. The authors prefer the term leucoderma for the usually painless, acquired loss of pigmentation from portions of the hair and skin to the classical name of vitiligo, on account of the confusion which has grown up around its use. To the student of albinism, leucoderma is the essential pathological pigmentation change, wherein he sees albinism in the making at least as regards hair and skin, and if he could understand the metabolism involved in this form of dynamic leucosis, there is little doubt that the obscurity of static or congenital leucosis would be largely dispelled. A review of numerous observations which distinguish between partial albinism and leucoderma, shows the universality of leucoderma, but great differences as to age, rapidity of development and duration of process, starting point, symmetry of arrangement and its relation to heredity and to nervous influences. There is no differential physiological feature observable between skin and hair of the leucodermatous and partially albinotic individuals.

In the last chapter (6) on partial albinism the cases are divided in piebalds and spottlings, the point of difference being only the extent of the white markings over extensive areas of the body. The sole guide to distinguish a case of partial albinism from one of leucoderma is the past history, and this may be uncertain because in the first months of life in the white race the skin is not sufficiently pigmented for partial albinism to be at once and certainly observed, and further, because the growth of the unpigmented areas will naturally take place in absolute size but not necessarily in relative size. Observations of colored and white piebalds and spottlings are reported. Considering the relative rareness of complete albinism, of the spotted or splashed condition, their relatively frequent coincidence in the same stock suggests that these abnormal pigment conditions are not wholly independent, and that as a working hypothesis it is reasonable to suppose that complete albinism, partial albinism, incomplete albinism and xanthism (yellowish or red skin in black-skinned individuals) and all static forms of leucosis, are phases of the same process and are probably linked with leucoderma and possibly other forms of dynamic leucosis. By "linked" the authors suggest that they mark the complete, incomplete, local or progressive failure of the same metabolic process, which may never start at all, never start in certain areas, or be imperfectly started, and again, being started may fail to maintain itself; further that every variety of this failure may individually or collectively be associated with certain stocks, which may either show hereditary failure of one phase, of several, or exceptionally of all phases of pigment metabolism.

The photographic plates A to Z and AA to ZZ of the atlas contain altogether 185 illustrations, some having reference to the text of Part I, others to chapters to be published later. Part 2 of the atlas is to include colored plates, maps, etc.

H. G. K.

**The Treatment of Syphilis with Salvarsan**, by Sanitätsrat Dr. WILHELM WECHSELMANN, of Berlin, Medical Director of the Skin and Venereal Disease Section, Rudolph Virchow Hospital, Berlin, with an introduction by PROFESSOR DR. PAUL EHRLICH, of Frankfurt-on-Main, Director of the Royal Institute for Experimental Therapeutics, Frankfurt. Only authorized translation by ABR. L. WOLBARST, M.D., of New York. With 19 textual figures and 16 colored illustrations. In 4°, pp. 200, *Rebman Co.*, New York. *New edition just issued*, \$5.00 net.

This book scarcely needs any introduction. For anybody who has heard anything about the first year of the practical use of salvarsan, Wechselmann's name is almost as familiar as Ehrlich's. His vast practical experience (more than fourteen hundred cases treated) exceeds that of any other man. His technique of injection of painless neutral suspensions has probably been super-

seded for good by intravenous injections. The same might be true of some other minor details; it nevertheless remains an incontrovertible fact that Wechselmann, in point of actual experience, is well qualified to speak authoritatively of the practical treatment of syphilis with salvarsan. And indeed, the reader will easily convince himself that subsequent research has, in the main, been confirmatory of Wechselmann's statements. The book is well translated and printed, and the illustrations are beautiful. To quote Ehrlich's words in the preface, "I am inclined to believe that it will readily find its readers, even without especial recommendation." It certainly will. F. E. G.

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